



GOVERNMENT OF BOMBAY

REPORT OF THE  
STUDY GROUP  
ON  
GREATER BOMBAY



BOMBAY

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# REPORT OF THE STUDY GROUP ON GREATER BOMBAY

## CHAPTER I

### INTRODUCTORY

#### 1. Appointment of the Study Group.

Government by its Resolution in the Political and Services Department No. MIS.-1157/76643-B, dated the 14th March 1958, appointed the Study Group to consider problems relating to congestion of traffic, deficiency of open spaces and playing fields, shortage of housing and over-concentration of industry in the metropolitan and suburban areas of Bombay City and to recommend specific measures in this regard. Government was pleased to appoint the following persons on the Study Group :—

1. Shri S. G. Barve, I.C.S.,  
Secretary to Government,  
Public Works Department ... Chairman.
2. Shri N. V. Modak,  
Consulting Engineer,  
Bombay Municipal Corporation. Member.
3. A representative of the Bombay  
Municipal Corporation ... Member.
4. A representative of the Railways ... Member.
5. A representative of the Indian  
Merchants' Chamber ... Member.
6. A representative of the Bombay  
Port Trust ... Member.
7. The Housing Commissioner, Bombay. Member.
8. The Director of Industries, Bombay. Member.
9. Deputy Secretary to Government,  
P. W. D. ... Member-Secretary.

The organisations at Nos. 3, 4, 5 and 6 above were requested to appoint their nominees on the Study Group and they communicated the names of the following persons :—

*Bombay Municipal Corporation.*—Shri K. B. Carnac, City Engineer, Bombay Municipal Corporation, and, in his absence, Shri S. V. Desai, Public Health Engineer of the Bombay Municipal Corporation.

**Bombay Port Trust.**—Shri K. V. Apte, B.E., A.M.I.E., a Trustee of the Port of Bombay.

**Central & Western Railways.**—Shri J. E. Castellino, Roads Superintendent, Western Railway.

**Indian Merchants' Chamber.**—Shri M. A. Master.

Shri Jasjit Singh, I.A.S., the then Collector of Bombay, was also later appointed as a member of the Study Group and continued subsequently as a member, in his personal capacity, on his transfer from the post of Collector to that of State Transport Officer, Bombay.

The names of the representatives of the four organisations mentioned at Nos. 3, 4, 5 and 6 were received by the middle of May 1958.

Shri I. B. Patel, B.A., LL.B., was appointed as Member-Secretary and Deputy Secretary to Government, P.W.D. and Shri J. D. Kale, B.E., A.M.I.E., was taken up as Deputy Engineer of the Study Group.

## 2. Terms of Reference.

Considering the prevailing state of affairs regarding extreme congestion in traffic on roads, over-crowding in trains, paucity of open spaces for schools, play-fields, dearth of housing accommodation, etc., the Study Group was asked to consider and recommend *inter alia* on the following problems :—

(1) The scheme for underground railways for relieving congestion in the Central and Southern areas of the Island.

(2) The project for a rail-cum-road bridge over the Thana Creek for the purpose of opening out the areas across the Thana Creek along the mainland.

(3) Steps for opening out other areas for suburban dispersion in the Salsette Island.

(4) Decentralization of Industry by regulating the location of new industrial units by exercising suitably the licensing and other appropriate powers of public authorities.

(5) Measures for overcoming the deficiency of housing including the problem of long term financial credit for promoting house building activities, supply of building materials and germane matters.

The Study Group was to make a factual study and take such evidence oral or written as it considered fit. All officers of the Bombay Government and public authorities were also requested by Government to give every help and assistance to the Study Group.

### 3. First Meeting of the Study Group.

The Study Group was asked to submit its report to Government within three months from the date of its constitution. The first meeting of the Study Group was held on 21st May 1958, immediately after all the bodies who were requested to nominate members for constituting the Study Group had communicated the names of their nominees to the Chairman. The Study Group may, therefore, be deemed to have been constituted from that date.

It was, however, not possible to finish the work in the time originally fixed. This had to be extended finally to the end of February 1959.

(a) *Appointment of Panels.*—In the first meeting of the Study Group it was considered how the wide range of subjects covered by the terms of the reference of the Study Group should be tackled and, after discussing the matter generally it was decided to appoint the following five Panels to consider specific groups of subjects as under :—

- (i) Housing and Housing Finance Panel.
- (ii) Building Materials Panel.
- (iii) Land and Open Spaces and other Community Requirements Panel.
- (iv) Industrial Location Panel.
- (v) Communications and Traffic Panel.

The Panels were to comprise initially of the following members :—

#### I. *Housing and Housing Finance Panel—*

- (i) Shri C. R. Desai, Housing Commissioner,  
Bombay ... ... Convener.
- (ii) Shri K. B. Carnac, City Engineer, Bombay  
Municipal Corporation ... ... Member.
- (iii) Shri M. A. Master ... ... Member.
- (iv) A member nominated by the Mill Owners'  
Association (Shri D. S. Bakhale.,  
I. C. S. (Retd.) was appointed as the  
nominee of the Mill Owners' Association)  
... ... Member.
- (v) Shri L. S. Dabholkar, Chairman,  
Bombay Co-operative Housing Finance  
Society ... ... Member.

#### II. *Building Material Panel—*

- (i) Shri Motichand G. Shaha, Chairman,  
Bombay Housing Board ... Convener.

- (ii) Shri K. V. Apte, B.E., A.M.I.E. ... Member.
- (iii) A member nominated by the Institute of Engineers (Shri B. P. Kapadia was appointed as a nominee of the Institute of Engineers). ... Member.
- (iv) A member nominated by the Institute of Architects (Shri S. H. Parelkar was appointed as a nominee of the Institute of Architects) ... ... Member.
- (v) Shri C. R. Desai, Housing Commissioner, Bombay ... ... Member.

### III. *Land and Open Spaces and other Community Requirements Panel—*

- (i) Shri S. G. Barve, I.C.S., Secretary to Government, Public Works Department and Chairman, Study Group ... Convener.
- (ii) Shri N. V. Modak, Consulting Engineer, Bombay Municipal Corporation ... Member.
- (iii) Shri Jasjit Singh, I.A.S., Collector of Bombay and later State Transport Officer ... ... Member.
- (iv) Shri K. B. Carnac, City Engineer, Bombay Municipal Corporation ... ... Member.
- (v) Kumari Kapila Khandwala, Education Officer, Bombay Municipal Corporation. Member.
- (vi) Shri V. L. Ghangurde, Estate Agent and Land Manager, Bombay Municipal Corporation ... ... Member.
- (vii) Shri C. Thomas, Labour Welfare Commissioner, Bombay ... ... Member.

Shri Jasjit Singh, I.A.S., who was Collector of Bombay at the time of his appointment was continued as a member of the Panel on his transfer as State Transport Officer.

### IV. *Industrial Location Panel—*

- (i) Dr. M. R. Mandlekar, Director of Industries Convener.
- (ii) Shri M. A. Master ... ... Member.
- (iii) Shri N. V. Modak ... ... Member.
- (iv) Shri S. V. Desai, Public Health Engineer, Bombay Municipal Corporation ... Member.
- (v) Shri K. V. Apte. ... Member.



### V. *Communications and Traffic Panel—*

- (i) Shri J. E. Castellino ... ... Convener.
- (ii) Deputy Commissioner of Police (Traffic). Member.
- (iii) Chief Engineer, Public Works Department,  
Bombay (Roads & Buildings), or his  
Deputy ... ... Member.
- (iv) City Engineer, Bombay Municipal Corpo-  
ration ... ... Member.
- (v) A member nominated by the Indian Roads  
and Transport Development Association  
(Shri A. D. Dhingra was appointed as  
nominee of the Indian Roads and Trans-  
port Development Association) ... Member.
- (vi) Shri Vishnuprasad N. Desai, Municipal  
Corporator ... ... Member.
- (vii) Traffic Manager, Bombay Electric Supply  
and Transport Undertaking ... Member.

Shri T. S. Rao, Chief Engineer, Bombay Electric Supply and Transport Undertaking was co-opted as an additional member of the Panel.

The conveners of the Panels were authorised to invite any individual to assist on any particular problem within their respective terms of reference. It was decided that the Panels should work on the following lines :—

(b) *Terms of reference of the Panels—(i) Housing and Housing Finance Panel.*—To consider the extent of housing needed (on some reasonable standards to be considered and specified clearly) for the existing population and probable growth in the immediate future over the next ten years or so ;

To assess the extent (and possibilities) of private building activity and housing by public authorities and employers.

Also to assess the extent of housing finance available from the existing housing finance agencies and to make recommendations in this behalf for making a larger quantum of finance available and for facilitating its utilisation by would be borrowers.

(ii) *Building Materials Panel.*—To consider the possibility of cheapening conventional building materials to encourage growth of housing activity in the city ;

To investigate the sources of bricks, sand and other building materials, methods for cheapening them, etc., including better location of brick kilns, etc.

(iii) *Land and Open Spaces and other Community Requirements Panel.*—To consider the extent of areas available for development (both for industries and residential purposes), element of high land prices as deterrent to building activity, control of speculation in land prices, zoning and regulation of land uses, etc. ;

To assess the present extent of open spaces with reference to the requirements on a reasonable basis in the congested areas of the City. Requirements of schools, hospitals and other public institutions will also be taken into account in this connection as well as requirement of space for clearance of existing slums.

(iv) *Industrial Location Panel.*—To assess the extent of (a) growth of existing industrial units, (b) location of new industrial units, in the City over the last 15 years or so ;

To consider the problem with reference to the location of new industries and growth of existing units in the future having regard to availabilities of land, water, power, and communication facilities both in the immediate over-flow areas of the City and more distant locations ;

To assess the possibilities of decentralisation of industry in the country-side and to ascertain the progress in the establishment of industrial estates elsewhere in the State as programmed in the Second Five-Year Plan period ;

To consider problems connected with industrial location as a part of the licensing powers under the Industries (Development and Regulation) Act, 1951, and as a part of the municipal licensing regulations.

(v) *Communications and Traffic Panel.*—To study the main elements of the traffic problem in the City proper and the problem of communications for the purpose of opening out adjacent areas for dispersion of population and also the questions of underground railway, the Thana creek bridge, and other projects and to suggest solutions and make recommendations in regard to them.

The Panels were requested to make a factual study of the subject-matter referred to them. In doing so they were requested to collect all the relevant data from all sources accessible to them, analyse the various issues of the subject-matter under reference and set out different measures which could be taken for tackling problems. It was decided that the final recommendations would be formulated by the whole Group itself after the receipt of the individual reports of the Panels.

The Panels were requested originally to submit their reports to the Study Group by 20th July 1958 in order to enable the study Group to submit its report to Government in time. This time limit had to be subsequently extended and finally upto the end of December 1958.

#### 4. Subsequent Meetings of the Study Group.

In the second and third meetings of the Study Group the progress made by the various panels in their work was generally discussed. The fourth meeting was held on 5th January 1959, after the receipt of the reports of the various Panels, to consider the position in the light of those reports, and to formulate the procedure for drawing up the Study Group's conclusions and drafting its report

The 5th and 6th meetings were held on 16th-17th and 27th January 1959 respectively and the draft of the Report was finally approved by the Study Group at its seventh meeting held on 23rd and 24th February 1959. The Study Group met finally on 26th February 1959 to sign the report.

#### 5. Discussions and Tours of Inspection.

The Chairman also held personal discussions on different aspects with several persons including the following officers :—

- (i) Shri L. T. Gholap, I.C.S. Chairman, Bombay Port Trust, Bombay.
- (ii) Shri D. S. Bakhale, I.C.S. Deputy Chairman, Mill Owners' Association, Bombay.  
(Retired).
- (iii) Shri N. P. Dubey, M.A. Housing Commissioner, Ministry of Housing and Supply, Government of India.  
(Cantab.).
- (iv) Shri D. N. Khurody, Joint Secretary to Government and Dairy Development Commissioner, Bombay.  
I.D.D. (Hons.).
- (v) Shri P. A. Bhaskar .. Regional Provident Fund Commissioner, Bombay.
- (vi) Shri J. F. Mancherji, Chief Mechanical Engineer, Western Railway.  
A.M.I. Mech.E.,
- (vii) Shri B. A. Koreshi, B.A., Director, Government Printing and Stationery, Bombay.  
LL.B.
- (viii) Shri K. L. Gambhir, Deputy Salt Commissioner, Bombay.  
B.Sc. (Hons.), M.Sc (Tech.).
- (ix) Shri I. N. Mehta ... Assessor and Collector of Taxes, Bombay Municipal Corporation.

- (x) Shri G. V. Damle ... Chief Accountant, Bombay Municipal Corporation.
- (xi) Dipl. Ing. Pranalal Patel ... Of the Joint Committee of the Engineering Association of India, Bombay Region, the All India Manufacturers Organisation, the Association of Indian Industries, the Bombay Industries Association and the Bombay Small Scale Industries Association, Bombay.

Members of the Group and the Panels undertook several tours of inspection round the city and in the suburban areas including visits to the areas across the Thana creek.

#### 6. Invitation of Suggestions.

Soon after the first meeting of the Study Group a note setting out the broad aspects of the subject-matter under examination by the Study Group was prepared and sent out to various bodies and individuals inviting their suggestions. Apart from a general invitation by public notice to anybody interested, the following categories of persons and associations were addressed with a view to inviting suggestions: different associations in the Bombay area interested in the problem; members of the Bombay Legislature from Bombay City and areas around the city; different trade associations in Bombay State recognised by Government; industrial Associations functioning in Bombay City; the local authorities around Bombay City; heads of Government Offices connected with the subject-matter under study by the Study Group.

Copies were also sent individually to the Chairman of Municipal Committees and to the Municipal Commissioner for circulation among interested corporators and Officers of the Corporation inviting their suggestions, if any.

A Press Conference was also held and suggestions were invited from any member of the general public interested in making them. Originally a time limit up to 20th July 1958 was fixed for receipt of such suggestions and memoranda. At the request of certain bodies for extension of time limit the period was subsequently extended up to the end of August 1958. The suggestions and memoranda received thereafter also have, however, been entertained and considered.

On the invitation of the Mayor, the Chairman of the Study Group addressed a meeting of Municipal Corporators on 15th September 1958.

All suggestions and memoranda received by the Study Group direct were transmitted to the concerned Panel or Panels for their consideration.

## **7. Reports of the Panels.**

Along with the Report of the Study Group, the Reports\* of the five Panels have also been printed. While the whole ground is once again generally covered in the Report of the Study Group, in certain cases, for more detailed information on a particular point, the reader will have to refer to the Panel Reports. A summary of Conclusions and Recommendations of the Study Group is also appended at the end. The responsibility for the final recommendations made in the Study Group's Report is of course that of the Study Group and its members.

## **8. A Note of Thanks.**

The Study Group is grateful to the individuals and organisations who sent in their suggestions. We also acknowledge the co-operation given by the Press, the citizens of Bombay, the Municipal Corporators and the Heads of Government Offices, who assisted in the collection of data required in connection with the work of the Study Group.

We are very grateful for the pains taken by Shri I. B. Patel, the Member-Secretary of the Study Group. Shri Patel, Shri J. D. Kale, Deputy Engineer and the staff have attended to their duties with great diligence.

Shri B. B. Godambe, Development Officer, Bombay Municipal Corporation and Shri V. V. Divatia, Joint Director of Industries, attended and assisted at all the meetings of the Group, for which the Group is very grateful to them.

The Group places on record its gratitude to the Conveners and Members of the different Panels. The documentation and study made by the different Panels of the problems in their respective fields of inquiry greatly facilitated the work of the Study Group. We are obliged to all the gentlemen who responded to the invitation of the Study Group and served on its Panels.

## CHAPTER II

### STATEMENT OF THE PROBLEM

#### 9. Growth of Population.

There has been a phenomenal increase in the population of the island of Bombay during the last about 18 years, from 1941 to 1958. During this period the population has shot up from 14·89 lakhs in 1941 to an estimated 31 lakhs at the close of 1958. This enormous increase in population has resulted in congestion of traffic, deficiency in open spaces, play-fields for schools, over-crowding in trains, overcrowding in houses, creation of slums, etc. The increased population has also constituted an increasingly intolerable burden on the sanitary services and public utilities of the island.

A small area of 26·19 sq. miles of the island of Bombay which is only ·016 per cent. of the area of the whole State, has as much as 1/4th of the total number (11,539) of registered factories in the State. The labour population in this tiny island area is as much as 3,70,000 out of a total number of about 10 lakh workers working in registered factories in the State. Such concentration of labour in a small area would naturally be among others a predisposing factor towards creation of slums of which the Corporation has listed as many as 144 in the island area.

The population of the Bombay Island is estimated, at the close of 1958, at 31 lakhs as noted above on the basis of the formula adopted by the Director General of Health Services, Government of India, for estimating increase in population. Projecting the same rate of increase in the future, the population of the Island over the next ten years would grow to the enormous figure of 50 lakhs; on the same basis of calculation, the population of the suburbs will grow to a figure of 25 lakhs. It must, however, be noted that the Director General's formula assumes an annual rate of growth equal to the average of the decennial increase in the decade previous to the census year for which actual census data is available. Thus the increase of population from 1951 to 1958 is based on the average decennial increase of the decade 1941 to 1951. If the same rate of decennial increase is assumed for the next ten years the population of the Island and the Suburbs would grow to a total staggering figure of 75 lakhs !

It must, however, be noted that the period 1941 to 1951 had certain unusual features about it so far as the increase in the population of this area is concerned. The factors that went to swell that increase were the boom period during World War II, influx of refugees on account of partition after 1947, etc. During this period a general trend of urbanisation and gravitation towards cities as well as an impetus in the development of industrial activities in the country have also been evident. While these last two factors would presumably continue to operate and perhaps may have even been accentuated during this period, the aforementioned adventitious factors, viz. influx of refugees and World War conditions must be discounted in estimating the future growth of population. Even so, as far as one can see, the population of Bombay area continues to swell steadily and while estimates of the likely future population might differ, there can be no two opinions about both the present degree of congestion and the need for arresting any further intensification of the situation.

The increase in population over the last about 18 years or so has resulted, apart from the general congestion, in intolerable densities of population in many localities in the Island. There is a meagre area (337 acres) of open spaces available to the general public in the island; besides, it is very unevenly distributed, large portions of it being badly situated with reference to accessibility from the thickly inhabited areas in the city. The position as regards open spaces, bad as it was in the previous decade, when it was reviewed by Shri N. V. Modak and Mr. Albert Mayer in their 'Outline of the Master Plan of Greater Bombay' (published in 1948) has worsened since. On the one hand the population of the city has since then increased beyond all anticipations and on the other hand, many of the measures of control and decentralization recommended in the Master Plan have not been operative in the meantime.

The limits of 'Greater Bombay' as it is known today extend from Colaba point in the south up to Dahisar on the Western Railway side and Mulund on the Central Railway side. It covers now a total area of 169 sq. miles. The Island of Bombay included within the limits of 'Greater Bombay', extends from Colaba point in the south to Mahim on the Western Railway side and Sion on the Central Railway side in the north and covers an area of about 26.19 sq. miles with the Mahim creek as the dividing line in the north. This was the limit of the Municipal jurisdiction until 1950 when it was extended up to Jogeshwari on the Western Railway side and Bhandup on the Central Railway side. This limit was further extended in February 1957 up to Dahisar on the Western Railway side and Mulund on the Central Railway side. The jurisdictions of the Commissioner of Police, Bombay and the Collector, Bombay

Suburban District are now co-terminus with the extended jurisdiction of the Bombay Municipal Corporation. The area of the suburban part of Greater Bombay north of the Mahim creek is about 142.81 sq. miles.

The population of the island of Bombay was 14.89 lakhs in 1941. It went up to 23.29 lakhs in 1951 and is estimated at 31 lakhs at the close of 1958, on the basis of the formula adopted by the Director General of Health Services, Government of India. The population of the suburbs up to Jogeshwari and Bhandup was 2.05 lakhs in 1941. This went up to 5.1 lakhs in 1951 and was 6.7 lakhs for the area inclusive of the extended suburbs up to Dahisar and Mulund. The population of the suburbs up to Jogeshwari and Bhandup is estimated on the same formula at 10 lakhs and that of the area inclusive of the extended suburbs at 12 lakhs at the close of 1958. The population of the island thus increased by 16 lakhs during the last about 18 years, i.e. more than doubled itself. The increase of the population of the suburban areas (as per 1951 jurisdiction) has been of the order of 7.95 lakhs.

The annual excess of births over deaths alone in the Island area is about 30,000. This natural excess alone would increase the population of the island by about 3 to 4 lakhs in the course of the next ten years; if the population of the Island were to increase to 50 lakhs as estimated on the basis of the Director General of Health Services' formula, there will obtain an average density of 298 persons per acre in the island and an average density of 604 persons per acre in its residential zone! The total residential area according to the zoning system tentatively proposed to be adopted by the Bombay Municipal Corporation in its 'development plan' is only 8,274 acres in the Island of Bombay.

As against these densities, Shri N. V. Modak and Mr. Albert Mayer, in their outline of the Master Plan for Greater Bombay, had postulated a density of 175 persons per acre in the residential areas in the Bombay Island in the first few projects, going down gradually to about 140 persons per acre. In the administrative county of London, in the Development Plan of 1951, one of the main objectives laid down is to achieve plot densities (decreasing from the centre outwards) generally averaging 200, 100 and 70 persons per acre.

#### **10. Concentration of Industries.**

A similar situation exists in respect of industries also. Greater Bombay having an area of only 169 sq. miles has 3,539 registered factories out of a total of 11,539, registered factories in the State. It will thus be seen that Bombay accounts for 1/3rd of the total number of factories in the State.



Further, out of these 3,500 odd factories in Greater Bombay, as many as 76 per cent. are located in Bombay Island which accounts for only 26·19 sq. miles out of the total "Greater Bombay" area of 169 sq. miles. These 3,500 odd factories in Greater Bombay account for over 44 per cent. of about 10,00,000 workers employed in the registered factories of Bombay State. 85 per cent of the factory employment in the Greater Bombay area arises within the Bombay island ! Looking to the ward-wise distribution of factories it is noticed that C, D, and E Wards\* together account for 42 per cent of the factories in the Bombay Municipal area. Thus it can be said that the city proper south of Parel (excluding A and B wards†) accommodates more than 2/5th of the total number of factories. Incidentally these are some of the most congested localities in Bombay. F and G wards comprising Worli, Parel and Sewri areas account for more than 15 per cent of the total factories. Thus about 57 per cent of the factories are located in a more or less contiguous area ranging from Dadar in the north to Carnac road in the south. In the suburban areas, which altogether account for 24 per cent. of factories, the distribution in terms of percentages of total number of factories appears to be more or less even in the different wards.

Major concentrations of labour force are found in ‡G-South (30·39 per cent.), F-South (15·08 per cent.), E-East (10·58 per cent.) and G-North (9·32 per cent.).

During the period from 1951-57 the number of working factories increased from 3,064 to 3,400 that is to say, there was an increase of 336 factories during that period. In the same period the average number of daily workers increased from 3,83,892 to 4,45,005. Thus there was an increase of 61,000 workers during this period. The location of industrial units in the residential zones affects

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\*C and D wards.—Area west of Mahomedali Road from Crawford Market, Dhobi Talao, Marine Lines Railway Station to Bellasis Road including Malabar Hill, Cumballa Hill, Tardeo and Mahalaxmi.

E ward.—Mazgaon, Byculla, Reay Road, Lamington Road North, Jacob Circle, and Arthur Road.

†A ward.—Colaba and Fort area upto Carnac Road.

B ward.—Area East of Mahomedali Road from Carnac Bridge to Sandhurst Road Railway Station.

‡G-South ward.—Race Course, Lower Parel, Elphinstone Road, Worli and New Prabhadevi.

F-South ward.—Lalbaug, Parel and Sewri.

E-East ward.—Mazgaon, Byculla and Reay Road.

G-North ward.—Dadar and Matunga (west of railway lines), Mahim and Dharavi.

the residents of those localities whereas concentration of labour force in certain areas tends to give rise to slums in these and other neighbouring areas.

It is, therefore, not without significance that some of the worst slums are found in those localities of Greater Bombay where the employment of the labour force is concentrated.

Analysis of licences issued under the Industries (Development and Regulation) Act, 1951, as amended in 1956, reveals that a high proportion of the new undertakings (60 per cent.) licensed for Greater Bombay is being established in the suburban areas. It is, however, to be noted that considerable "substantial expansion" has been licensed in the \*G-South, F-South, E-East wards which are already heavily marked with large employment concentrations. It is observed that of the 459 licences issued in Bombay State for schemes of establishing new undertakings, "substantial expansion" of and manufacture of new articles in the existing undertakings, as many as 265 licences are for Greater Bombay. It is quite likely that since a good many industries were not classed as "scheduled industries" under the Industries (Development and Regulation) Act, 1951, until it was amended in 1956, some new large scale undertakings might have come up or "substantial expansion" might have taken place in the existing units, without requiring any licence. Again, several small scale registered factories which do not require such licence under the above Act might also have been established.

It is evident, however, from the data available that there has been a distinct trend in recent years towards a further intensification of the concentration of industry in the Bombay area.

## 11. Traffic.

Geographically, the island of Bombay is about 10 miles long north-south and about 2½ miles wide east-west. Besides, with the business centre located in the south, viz., in the Fort area, the movement of traffic is southwards in the morning and northwards in the evening. To cater for these enormous streams of traffic there exist only two main north-south roads—one along Gokhale road, Cadell road, Annie Beasant road, Love Grove road, Peddar road, Opera House, Marine Drive or Queen's road and the other Vincent road, Parel road, Victoria Garden road, Ibrahim Rahimtoola road, Mahomedali road and Dadabhoy Naorji road.

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\*G-South ward.—Race Course, Lower Parel, Elphinstone Road, Worli and New Prabhadevi.

F-South ward.—Lalbaug, Parel and Sewri.

E-East ward.—Mazgaon, Byculla and Reay Road.

Concomitant with the growth of industries and population in the City of Bombay, there has been a large increase in the number of vehicles.

The number of power driven vehicles of various categories in operation in the Greater Bombay area during the years 1953-58, as ascertained from the Regional Transport Officer, Bombay, was as under :—

Particulars.	Years.					
	1953	1954	1955	1956	1957	1958
1. Motor cycles ...	2,200	2,300	2,350	2,600	3,000	3,650
2. Motor Cars ...	23,250	25,256	25,854	26,262	28,325	30,700
3. Motor cabs ...	2,642	3,200	3,390	3,650	3,720	3,800
4. Auto Rickshaws ...	2	2	2	7	13	28
5. Stage Carriage (Buses).	537	639	672	751	945	960
6. Motor Trucks ...	7,000	7,321	7,363	8,130	8,850	9,620
7. School Buses ...	50	52	60	65	171	190
8. Private Service Vehicles.	...	...	49	60	64	66
9. Others (Trailers, Tractors, etc.).	400	450	470	550	640	656
Total ...	36,081	39,220	40,210	42,075	45,728	49,670

In addition, about 6,498 vehicles from other regions in the State used the Greater Bombay roads under temporary permits from time to time during the year ending 31st December 1958. About 497 trucks and 560 cars from other States also operated on similar temporary permits on the Greater Bombay roads during the year 1958. The number of vehicles will further increase during the next 10 years and, projecting at the same rate of increase as is revealed during the last five years, it is likely that the number of vehicles in operation in the Bombay region would be of the order of 80,000.

From year to year rail traffic has been mounting and the railways are facing a very serious problem. The following figures show clearly the sharp upward trend of suburban traffic on the two railways :—

	Years.				
	1953-54	1954-55	1955-56	1956-57	1957-58
<i>Central Railway—</i>					
Passengers.	140,716,000	147,276,000	159,193,000	171,859,000	171,878,000
No. of trains.	200,062	200,343	202,541	205,936	206,876
<i>Western Railway—</i>					
Passengers ...	153,724,000	162,941,000	177,764,000	180,330,000	207,980,000
No. of trains.	...	106,316	107,621	111,031	121,628

The B.E.S.T. Undertaking has been progressively increasing the number of buses in the city, their number having gone up from 343 buses in 1952-53 to about 960 buses by now. The number of passengers carried by buses in 1952-53, was 226,677,000. In 1957 this number had gone up to 419,651,000. The trams in addition carried 176,667,000 passengers

in 1957-58. Having regard to the shape and width of the roads, and the enormous increase in the number of conveyances to be accommodated on them it is feared by the B.E.S.T. authorities that a *physical limit* has now been practically reached and that the bus routes cannot take any more vehicles. It is evident that unless these conditions are controlled and traffic circulation improved, the situation would become increasingly intolerable. In spite of very considerable expansion in services provided by the B.E.S.T. as well as the suburban railways during recent years the traffic has more than outpaced the increase in these facilities.

## 12. Consequences of existing Congestion.

(a) *Housing inadequacy.*—The overcrowding in the city and the very heavy industrial activity in this small area have resulted not only in extreme pressure on the utility services and in reducing the rate of available open space for the city's population, but also have greatly aggravated the housing situation in the city.

A statement of the housing problem as it existed about a decade ago is detailed in (i) the Report of the Housing Panel for the Greater Bombay Scheme published in January 1946, (ii) the Preliminary Report of the Development of the Suburbs and Town Planning Panel of Bombay City and Suburbs Post-War Development Committee published in March 1946 and lastly in (iii) an Outline of the Master Plan for Greater Bombay published in 1948. As stated in these reports the housing situation in Bombay was extremely critical even ten years ago. During the last decade conditions have much worsened and the situation has become more or less desperate, due to the phenomenal growth of population in the City without corresponding addition of housing accommodation.

There are presently about 4,08,100 tenements of all categories in the island of Bombay and about 1,65,600 tenements in the suburbs. There is thus total accommodation of about 5,73,700 tenements in the whole of Greater Bombay which (overlooking that a large proportion of these tenements are single-room) may be said to be enough to accommodate at the rate of five persons about 28 lakh persons. Considering the fact that the existing population is about 43 lakhs, it may be reckoned that about 15 lakh persons need accommodation and it would require about 3 lakh new tenements to house them. This immediate need in itself is a colossal problem.

This deficit of housing of a total of three lakhs of tenements does not take into account—

(a) the large need for replacement of \*dilapidating houses as they steadily go out of commission, and

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\*Please see Chapter III, Paragraph 15, for information regarding dilapidated houses.

(b) the accumulating deficit in prospect over the ensuing 10 or 12 years due to the recurring shortfall of housing accommodation against the steady increase in the population of the City.

The housing programme for the Bombay area must, therefore, cope with the need for clearing this huge backlog of housing accommodation over and above keeping pace with the growth in population.

These circumstances regarding housing have naturally resulted in extreme conditions of over-crowding. Apart from large numbers of pavement dwellers and persons living in nooks and crannies, under public bridges, under staircases, along the fringe between compound walls and the public streets on which they abut and so forth, large masses of the population reside in desperate conditions of overcrowding at the rate of six to nine persons, and indeed in several cases of many more, to each room of about a hundred sq. feet of floor space.

The general densities in the different localities in the island as per the census of 1941 and how they have intensified by the time of the subsequent census of 1951 (and these have presumably still further intensified since !) are tabulated in the Appendix II of the Report of Land and Open Spaces and Other Community Requirements Panel.

The island of Bombay is also strewn with a number of slums listed as such by the Municipal Corporation. The slums comprise of both built up areas and unbuilt assemblages of shacks and huts. A statement of slums in the island obtained from the Bombay Municipal Corporation is appended to the Report of the Land and Open Spaces and Other Community Requirements Panel (*vide* Appendix V of that Report). The slum population of 4,15,875 on an area of 877 acres gives a density of 474 persons per acre. Density in some of these slums however is as high as 1,175 persons per acre. These slums, which in many cases have not even the minimum amenities of life necessary for the maintenance of physical and social health, are a menace to the public health not only of the inmates of the slums but also of the city as a whole.

(b) *Shortage of open spaces, etc.*—The problem of open spaces, recreational areas and land essential for community requirements arises in its most intractable form within the island of Bombay and with reference to the large population inhabiting it. At the time of the preparation of the Master Plan in 1947 by Shri N. V. Modak and Mr. Albert Mayer it was observed that “the Bombay island has a shamefully negligible land of 550 acres of open spaces most of which badly situated with respect to accessibility to those who need it most”. The position has not improved since then. These

open spaces include about 170 acres in Fort, 21 acres in Kennedy Sea Face area, 28 acres in Malabar Hill area, about 13 acres in Mazgaon (Baptista Garden), 47 acres of Victoria Garden, 60 acres in Mahalaxmi area (Willingdon Sports Club and Hornby Vellard area) and 23 acres of Shivaji Park. Thus whatever open areas are available are concentrated in certain localities only, many of the locations being remote from the areas needing them most. Many of the schools in the city are without their own buildings, being housed in hired buildings; and most of them have no playgrounds for the children to play. At present the island of Bombay has only 747.18 acres of parks and play-fields which include only 337.27 acres of parks open to all as against an estimated requirement of 4,500 acres for a population of about 30 lakhs.

The report of the Land and Open Spaces and Other Community Requirements Panel will show that only a small proportion of schools (less than 25 per cent.) are in their own buildings: hardly any school in the city has an adequate compound or a sufficient playground and almost all rented premises used by the Municipal Schools are unsuitable due to odd sizes of rooms, insanitary surroundings, bad lighting, etc. Apart from the unsuitability of the available accommodation, there is a *net shortage* of total accommodation against what is needed. At present as many as 50 to 55 pupils are accommodated, as a rule, in a room of 400 sq. ft. in area as against 42-45 pupils for whom this area is considered necessary.

Nearly 50 per cent. of the Municipal schools are on a two-shift system and 50 others have to work perforce as at present on even a three-shift system! About 30 to 40 per cent. of secondary schools also have to meet in double sessions.

It is estimated by the Education Officer of the Bombay Municipal Corporation that a minimum additional space of 115 acres for purposes of school buildings and 355 acres for playgrounds is \*required for the existing schools and a further 176 acres for additional classes and playgrounds for the additional pupils to be admitted to school in the next ten years (assuming the present population of the island to remain stationary and not increase in the meantime) is essential in the island even on conservative standards of provision for these purposes.

School buildings and playgrounds are one illustration of the community requirements, and detailed information bearing on this is quoted as illustrative of the desperate paucity of space for all such purposes.

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\*The area is inclusive of that required for secondary schools. For more detailed information and basis of calculation refer to Appendix IV of the Land and Open Spaces and Other Community Requirements Panel Report.

(c) *Traffic delays and congestion.*—With the increase in population and industrial and business activity, the volume of traffic has tremendously increased. The state of traffic circulation and the main arteries of traffic have, however, remained practically stationary with the result that there has been a grave intensification of traffic hazards\* apart from retardation of the flow of traffic and waste of time and discomfort, not to speak of the cost in expenditure of time and the consumption of petrol, etc. The foot note below will give an idea of the traffic accidents. Mention also must be made of the social disabilities and domestic up-sets imposed on the community by this state of affairs. If nearly a couple of hours are taken daily by the bread-winner and head of the family, each way in going to or returning from work, the incidence of this on family life and the unbringing of children cannot fail to be disastrous. Such conditions have naturally militated against the development of the suburbs.

(d) *Deterioration of public utility services.*—The public utilities serving the Island, like the Municipal water supply and drainage system, had been originally designed to serve a population of a maximum of 20 lakhs. Relief sewers and expansions of necessary lengths of the water supply distribution mains, etc., can, according to the Municipal authorities, at the most stretch out these utilities to serve a further four or five lakhs of population. There are physical limitations in the opinion of the Municipal authorities to any further increase in the size of the utilities or in duplicating the mains due to sheer lack of availability of space for accommodating such duplicating or relief lines under the road surfaces of the existing road system. Already in the Island there is an estimated population at present of 31 lakhs. This pressure of population much in excess of the maximum capacity of these vital utilities must necessarily result, as indeed it has resulted, in a gross debasement of the minimum standards requisite for public health.

Having in view the shortage of open spaces, the desparate shortage of housing, the intolerable traffic congestion and the mounting pressure on the public utilities, it is manifest enough that the

\*The figures of accidents by motor vehicles and tram cars during a few typical years in the recent past were :—

	1940		1945		1950		1955		1958	
	Fatal.	Non-Fatal.	Fatal.	Non-Fatal.	Fatal.	Non-Fatal.	Fatal.	Non-Fatal.	Fatal.	Non-Fatal.
Motor Vehicles.	89	4,703	198	5,424	215	10,375	236	16,268	263	19,809
Tram-cars ...	11	393	37	741	5	1,215	8	1,668	2	1,410

present population itself of the Bombay island greatly exceeds what this area can reasonably support in anything like conditions approximating to the minimum requirements of an acceptable urban life. Any prospect of an increase in this population, which is bound to occur unless there are specific measures for discouraging the growth, must, therefore, be viewed with grave concern and alarm. The problem has thus become quite desperate and remedial measures, which by the very nature of things, must take a considerable time before they become effective, must be set in motion without the slightest delay.





## CHAPTER III

### ANALYSIS OF THE PROBLEM

#### 13. Lack of Development of Mofussil areas.

Several factors have contributed in bringing about the prevailing conditions of congestion in the city and the consequent spectre of slums, shortage of housing accommodation, lack of open spaces and heavy traffic loads.

Absence of essential facilities like transport, electricity, water supply, etc., needed for the development of the resources in the mofussil areas and their existence for a long time in Bombay have attracted industries towards Bombay. Moreover, the special additional facilities of the port, the existence of well-established markets and the special facilities obtainable from banks and commercial houses in the city and several other factors of a similar nature which it takes long to provide elsewhere, have led the industries to establish in the Greater Bombay area and more especially in the island of Bombay which accounts for 25 per cent. of the working factories in the entire State of Bombay. Even those industries which could have conveniently established themselves outside Greater Bombay, if necessary facilities were available are found in this City drawing men and materials from distant places. To serve the main industrial conurbation, ancillary and secondary industries and services have established themselves in the same area conforming to the general proclivity towards "snow-balling" of industries. Further, many financial, industrial and business houses have established themselves in the Greater Bombay area and since these provide the talent, drive and financial wherewithal which are necessary for further industrial development, there is a strong natural trend for further industrial activity to gravitate to the Bombay area. Lack of such facilities outside the Greater Bombay area conversely acts as a deterrent against both the original location and subsequent movement of industries outside Greater Bombay.

We have already noticed how even after the enactment of the Industries (Development and Regulation) Act, 1951, under which powers for the location of 'new' industries and 'substantial expansion' to existing industrial units to which the Act applies, have accrued to the authorities, a lot of further industrial development has continued to be licensed in the Greater Bombay area.

It is also important to observe that some of the existing industrial undertakings are not working to their full capacity or are not working more than one shift, for one reason or another. From the general view-point of industrial development and full utilisation of available plant and capacity, it is desirable that this idle capacity may be commissioned or these industrial undertaking may work additional shifts, or run to a fuller capacity. We have to take note, however, that from our point of view such a consummation would result in a further intensification of the concentration of employment in the Island area.

#### **14. Lack of Development of Suburbs.**

Within the Greater Bombay area, the local concentration of population in the confines of the Bombay island has been caused and accentuated by the tardy and haphazard growth of facilities for residential settlement in the Suburbs.

We have already noted how the island of Bombay accounts for 76 per cent. of the registered factories and 85 per cent. of the labour employed in such factories in the Greater Bombay.

The facilities for movement of traffic from the Island to the suburbs and within the suburbs have been and still continue to be very inadequate and unsatisfactory. Gross overcrowding in the suburban trains has become a chronic feature over several years now ; and in spite of such attempts as the Railways have made to expand the carrying capacity, the overcrowding appears to be steadily intensifying rather than otherwise. Moreover vast areas in the Salsette island within the jurisdiction of the Municipality are open and available ; but there are no road communications or provision of water supply, drainage and other public utilities to facilitate residential and other development. The two main existing arteries leading into the suburbs, viz., the section of the Bombay-Agra Road from Kurla to Mulund and the Bandra-Ghodbunder Road, which have to bear the greatest load of the Suburban traffic, are grossly deficient to cope with the traffic arising. Large stretches of the latter road are poorly surfaced, narrow and bottle-necked at many points ; the Bombay-Poona road section between Thana and Bombay and more particularly between Mulund and Kurla in the Greater Bombay limits is now subjected to a tremendous volume of miscellaneous local and through traffic wholly beyond its capacity ; the ribbon development of industries that has taken place alongside of this road in recent years in the Greater Bombay area and which continues apace at the moment has further aggravated the situation. The construction of two Express Highways for relieving the traffic congestion on these important arteries leading to the Suburbs was suggested in the Master Plan for Bombay City prepared in 1947. The decision about the construction

of the two Express Highways, however, was taken belatedly several years later. While provision has been made for the construction of these two important road lengths in the current Five-Year Plan of the State, the actual construction has been taken up very recently and has so far been very slow and halting.

A large part of the considerable industrial development that has taken place in the Suburbs in recent years has been unplanned and haphazard, being largely of the nature of ribbon development along a few existing lines of communication leading to a great accentuation of traffic conditions on these narrow arteries leading to the suburbs.

The jurisdiction of the Bombay Municipal Corporation was extended beyond the Bombay island to take in 67 sq. miles of suburban territory in the Salsette Island in 1950 and subsequently to cover a further 75 sq. miles in 1957. While the jurisdiction has been extended, there has not been corresponding development of planned expansion of communications and utilities for steadily opening out additional areas for residential and industrial settlement in the extended Suburbs.

Moreover, such suburban development as has taken place has not been sufficiently 'self-contained'. While local markets have established themselves in some of the suburban localities, the centre of gravity of business and commercial activity has continued to be located within the island of Bombay and particularly towards its southern tip, thus resulting in a lot of avoidable traffic from the suburban areas through constricted arteries across the whole length of the Bombay Island.

### 15. Shortfall of Housing.

We have already noted how it is reckoned that in the Greater Bombay area the total housing accommodation available at present is short by three lakhs of tenements as compared to the population of the area.

Apart from this present deficit in housing accommodation there is the threatened reduction in housing accommodation due to the collapse or demolition of the dilapidated buildings. It is estimated by the Municipal authorities that some 18,000 buildings in the Greater Bombay area will need extensive repairs or replacement in the course of the next fifteen years. Of these 18,000 buildings, according to their reckoning, 1,000 buildings are due for almost immediate demolition ; 10,000 buildings have a life of about 10 years and a further 7,000 buildings a life of 15 years altogether from now. For the same reasons for which private housing activity has failed to keep pace with the increase in population, it is also failing to take the

necessary measures for the repair and restoration of these dilapidating buildings. The housing deficit that would occur as a result of these buildings finally going out of commission would be a net addition to the housing deficit of three lakhs of tenements computed above.

An analysis of the volume of constructional activity of house building in the Bombay area over the period 1951-52 to 1955-56 is revealing. On an average 5,000 tenements have been constructed annually during this period. Of this, 36 per cent. of tenements are accountable to the activities of public authorities, the remaining 64 per cent. being accounted for by private house building enterprise. Of the tenements put up by private enterprise, 62 per cent. have consisted of blocks and only 38 per cent. were one and two room tenements; it is these last which are specially relevant to the question of mass housing shortage and these form only 24 per cent. of the total tenements put up by all agencies.

In the past, housing accommodation was being provided principally by private investors; but since the last World War owing to the increased cost of building materials and labour, Rent Control measures and the growing burden of local, State and Central taxation, private enterprise in house building activity is increasingly found to be unable to cope with the requirements of the situation. As at present, the minimum cost of a tenement with the minimum accommodation permissible under Municipal Rules comes to about Rs. 6,000. With Municipal taxes and a return of  $9\frac{1}{2}$  per cent. (to allow for income-tax deductions on the income of the land-lord) its market rent is likely to work up to about Rs. 75 per month or even more, which is clearly beyond the reach of more than three-fourths of the City's population.

The various provisions of the Bombay Rents, Hotels and Lodging House Rent Control Act, 1947 and the burden of Central, State and local taxes work as a deterrent to the investment of fresh capital into house building activity.

Further with the grant of financial concessions like exemption from income-tax and other taxes by the Government for inducing investment in 'Small Savings', the net return available from investment in house-buildings has ceased to be attractive and this has further reduced the flow of capital into this line of activity.

Private house building enterprise has accordingly been unable to provide significant housing accommodation in recent years towards the requirements of the vast majority of the working class, of the lower income groups and indeed a large portion of the middle and lower middle classes as well. Private house building enterprise has principally concentrated in recent years on flats and tenements of high rentals.

*In these circumstances it is obvious that unless there is a massive programme of public housing, under which housing accommodation would become available at subsidised rentals, the housing problem in Bombay City for the lower and maddie-income groups and working classes cannot be solved.*

This is an important new fact without recognising which no measures for housing and slum-clearance in urban conditions can at all succeed. At the present-day costs of construction it is just impossible to provide housing of even the minimum standard to a large majority of the urban population whose incomes are not large enough to pay the economic rental of it. An element of recurring subsidy of rentals, is, therefore, inevitable if the housing problem is to be solved.

The Housing and Housing Finance Panel have noticed the various difficulties and handicaps as at present, which deter and reduce the volume of private house building activity generally. They have also made recommendations as to how some of these difficulties can be remedied and other handicaps ameliorated. Having regard to the enormous deficit in housing accommodation, besides a massive public housing programme, it is desirable that every possible effort should also be made to enlist the co-operation of the private house builder, among other things by making such adjustments in the taxation and other laws as may enable him to earn a fair net return on his investment.

A rough analysis of the total population of the Bombay area by employments is revealing. Public employment, that is to say, service of the Central and State Government Departments, Railways and Public Corporations, Municipality, B.E.S.T. Undertaking, etc. accounts altogether for 2,60,000 employees. 4,45,000 persons are engaged in organised industry. 3,40,000 persons are engaged in commercial, business and other establishments coming under the Bombay Shops and Establishments Act, 1939.

Even allowing for the fact that a certain proportion of persons, particularly in the working classes, live single and do not keep their families in Bombay City, and a family may have more than one earner, it will be seen from this analysis how these three important categories practically exhaust and account for the bulk of the population in Bombay City.

This analysis has an obvious bearing on the evolution of an adequate public housing programme to tackle the present situation.

## **16. Planned use of Land.**

Land is the basic resource for purposes of all town planning. It is because this resource has not been utilised to the best advantage hithertofore that the present difficulties of shortage of space for various requirements of the community have arisen.

The Land and Open Spaces and Other Community Requirements Panel has analysed in some detail the requirements of land in the island of Bombay and in the Suburbs for various purposes. The report reveals the acute dearth of land in the Island even for meeting the bare necessities of land for schools, playground and for recreational purposes, even apart from housing. The present situation can be retrieved or at least ameliorated only by introducing planned utilisation of the land that is still available or could easily be made available.

The problem of open spaces, recreational areas and land for essential community requirements arises in its most intractable form within the island of Bombay and with reference to the large population at present inhabiting it.

Outside the Island of Bombay, i.e., in the suburbs of Greater Bombay, provided suitable steps are taken for reserving grounds for such open spaces and community requirements, it is easily practicable to provide for such requirements not only of the present suburban population and of the likely increases therein but also for the over-spill of the Island population into the Suburban areas.

One of the principal difficulties in providing additional housing for easing the housing situation in the Island of Bombay is the difficulty of finding building sites at reasonable rates.

Having regard to the extreme paucity of unbuilt open spaces in the City the bulk of future developmental or house-building activity must obviously be located in the suburban areas outside the Island of Bombay. The Land and Open Spaces and other Community Requirements Panel have cast a rough budget showing therein the availability of land including reclamation possibilities and the requirements of land against such availability for essential community purposes. The possibility of fairly considerable areas becoming available by reclamations on the periphery of the Island to which we refer in greater detail later, is a very welcome relief to this over-all situation which would otherwise be desperate and practically incurable. Nevertheless, the position about land for essential community requirements in *particular localities* remains extremely difficult.

Even the provision of the land necessary for priority requirements in particular localities within the Island will not be practicable unless the following measures are taken for appropriating sites as they become available towards community purposes, namely (i) reclamation of sites, (ii) earmarking of open spaces required for community requirements and (iii) appropriating towards such requirements, these sites as they happen to become available. The question of compensation for such land has been dealt with subsequently in paragraph 23 of Chapter IV.

## CHAPTER IV

### BROAD PRESCRIPTIONS

#### 17. Location of Industry.

We have noticed above how one of the most important contributory factors towards the present congestion of population in the Bombay area and its concomitant evil effects has been the lack of a definite policy regarding location of industry. It follows, therefore, that a definite industrial location policy in the future is a *sine qua non* for preventing further concentration of industry in the Bombay area.

It is the absence of essential facilities like transport, electricity, water supply, etc., needed for the development of industry in the mofussil areas and their existence in Bombay which has resulted in industrial concentration in the Bombay area. If this trend is to be halted and reversed it is necessary to provide such facilities in the diverse parts of the State which hold out promise of industrial development. The provision of such facilities in the mofussil areas would result not only in encouraging location of new ventures in the mofussil instead of in the Bombay area, but also perhaps to some extent in discouraging applications for substantial expansion of existing industrial undertakings in the Bombay area.

In the provision of these facilities the supply of cheap electrical power plays a crucial part. Communication facilities are available at a large number of points in the mofussil areas; water supply facilities can generally speaking be procured at more or less cost in most places; for certain types of industries the disposal of effluent and industrial wastes limits severely the choice of sites for location. The availability of power is, however, by far the most important decisive factor for the location of industry in the mofussil areas. With the completion of the Koyna Project, transmission lines of power will traverse considerable parts of south Maharashtra and the Konkan strip. In recent years in other parts of the State also there has been a considerable expansion of electrical grids spreading out a net-work of thermal power. The further expansion of power facilities will presumably be an important component of the development programmes of the Third and subsequent Plan periods. Against this background if concerted and steady efforts are made by

developing "industrial estates", with the necessary services laid on, in the mofussil areas we believe it would be possible growingly to create conditions in many centres favourable to the establishment of new industrial units. Such a policy would atonce help bring a measure of prosperity to the mofussil areas as well as help in deflecting the trend towards over-concentration of industry in the Bombay area.

(a) *Shifting of Industries.*—While there will be general agreement on the suggestions that the establishment of new industrial units—

(a) in the mofussil areas, and

(b) in the suburban areas of Bombay should be encouraged in every possible way; and furthermore, while the complementary proposition that, as far as possible, the establishment of new units or the expansion of existing ones in the Island of Bombay should be avoided; the further desideratum concerning the bringing about a transfer of *existing* industrial units from the Island of Bombay, to either the suburbs or to the mofussil areas, in the interest of discongesting the city raises all manner of difficulties.

It will, however, be agreed that the aim should be to bring about any such discongestion of the Island area, as far as possible, by creating incentives for removal of such units outside this area.

The Industrial Location Panel has dealt in some detail with the problem of shifting existing industrial units from the City. We endorse the view of the Panel that ordinarily the existing industrial units should not be called upon to shift outside the Greater Bombay area. These industries have invested substantial amounts, many of them depend on several special facilities peculiar to Bombay City as they are in many cases mutually interdependent for each other's products. Asking individual units from such industries to shift from their present location and cut themselves away from the industrial nexus to which they belong will generally lead to impairment of their productive capacity and increase their costs of production. From the point of view of the general economy of the country also any such impairment of the productive capacity or the competitive position of such units would be highly undesirable. If, however, some industries decide of their own accord to shift from the Island area to the suburban area or from the Greater Bombay area to an outside place all possible encouragement should be given to them. In fact we would suggest that circumstances should be created whereby sufficient positive encouragement and incentives are provided to industrial units to shift their existing industrial undertakings of their own volition.



As suggested by the Industrial Location Panel in this behalf we would recommend that the progress in the matter may first be watched for a period of five years on these lines.

(b) *Future location of Industries in the Island.*—Steps will in any case have to be taken to prevent the future clustering of industries in Greater Bombay.

We agree in the following recommendations made in this behalf by the Industrial Location Panel :—

No new industrial units should ordinarily be allowed in the Bombay island area, exceptions being made only in the case of industries processing large quantities of imported raw materials mainly for export of finished products, or specially dependent on port facilities or inseparably ancillary to existing units already located there. Each case must obviously be judged on its merits having regard to its own circumstances.

Applications for substantial additions to or/and manufacture of "new articles" in the existing industrial units located in the Island area, under the Industries (Development and Regulation) Act, 1951, should not ordinarily be recommended to the Government of India by the State authorities. This rule should also apply to large scale units not amenable to licensing under the Industries (Development and Regulation) Act, 1951. Exception to this general rule will have to be allowed in deserving cases especially where a scheme forms an integral part of the process carried on in an existing industrial undertaking, provided always that such scheme does not envisage appreciable increase in employment and/or undue increase in traffic loads and such expansion is for the purpose of rehabilitating a losing unit or for improving the working efficiency of the existing unit or balancing an existing industrial undertaking.

Before making any recommendation to the Government of India in regard to a proposal for the establishment of a new unit or for the expansion of an existing unit in Greater Bombay area under the Industries (Development and Regulation) Act, 1951, it would be desirable for the State Government to consult the Local Authority. If necessary, a time-limit may be imposed on the Local Authority for its reply.

Similarly, no new small scale factory should also be permitted to be established in the Island area, exceptions being made in the case of units catering to the needs of other industrial units and requiring to be in close proximity of that unit. Such units, should, however, be allowed only in industrial estates or industrial zones in the Island.

There need be no bar as a rule to cottage scale units being allowed to remain in the Island or increasing their activities subject nevertheless to municipal regulations as these are not likely normally to add appreciably to the congestion.

Some industrial units in the Bombay area as elsewhere are working to less than capacity that is to say that some of the installed capacity for some reason lies unused. Obviously we must envisage that the city will have to accommodate the increase of industrial labour incidental to the fuller utilisation of installed capacity, whether by introduction of new shifts or otherwise.

(c) *Non-conforming Industries.*—There is a related but distinct problem, viz., that of industrial units under the category of “non-conforming” users of land as per “land user” arrangements adopted by the Municipality. We understand that there are 2,000 such small and medium-sized so called non-conforming industrial units which have been, however, given temporary permission by the Municipality for limited periods.

The progress made in the removal of such non-conforming users under the present arrangements seems to have been very tardy so far, only 2 per cent. of such users having shifted until now.

The problem of shifting these non-conforming users from the point of view of the land user regulations of the Municipal Corporation is, however, distinguishable and separate from the larger issue of bringing about a discongestion of the Island of Bombay by removing industrial units therefrom to other areas. The former is suggested on the ground of local nuisance caused to residential localities, etc., in which those units are located; the latter, from the point of view of bringing about on overall discongestion of population, traffic, etc., in the overpressed land area of the Bombay island. The former is thus an issue principally of municipal regulation whereas the latter is one of regional planning.

Of course to the extent to which such non-conforming units could be shifted out of Bombay Island altogether, either by location in the suburbs or elsewhere, the general objective of regional planning would be assisted by the specific action taken in pursuance of municipal zoning regulations.

Nevertheless so far as the enforcement of municipal zoning regulations is concerned, the same broad approach is to be recommended; viz., as far as possible incentives should be created and facilities given to bring about the desired shift before the appropriate legal sanctions are applied.

(d) *Establishment of Industrial Estates.*— To this end we commend the proposal of the Industrial Location Panel to set up twenty industrial estates in the island of Bombay and twenty-five industrial estates in the suburbs to afford ready facilities to these non-conforming units to shift themselves.

(e) *Establishment of industries in the Suburbs.*—We feel moreover that those industries which can conveniently establish themselves outside Greater Bombay should not be allowed to be established even in the suburban limits. Industries which depend to a large extent on bulky raw materials like minerals, agricultural and forest products, etc., or intermediate products like oil cakes, etc., should be established in the mofussil areas where such bulky raw materials are available.

Establishment of large scale industries requiring heavy machinery should, if allowed in the Greater Bombay limits, be permitted only on the recent extensions of the Bombay Municipal Corporation limits, viz., areas beyond Bhandup on the Central Railway side and beyond Jogeshwari on the Western Railway side.

If industries, particularly those offending the zoning regulations in the Island, are to be encouraged to shift to the Suburbs and if new industries are to be deflected to the suburbs of Greater Bombay instead of being located in the Island area it is essential to provide in the suburbs in the prescribed industrial areas conditions favourable to the location of industrial units.

We feel that conditions must be specially created to enable small scale units to shift in a planned manner to the suburbs. For this purpose, we recommend the Industrial Location Panel's recommendation that the establishment of the 25 industrial estates and the ten industrial areas in the Suburbs should be taken up on a priority basis and facilities required for the industry in such areas provided as early as possible.

(f) *Requirement of areas for industries in the suburbs.*—Of the 12.47 sq. miles of land allocated provisionally for industrial use in the suburban areas of Greater Bombay by the Municipality roughly about 1/3rd is already occupied by the existing industries in this area. This leaves an area of about eight sq. miles still available for development. A portion of it would be required for development of the 25 industrial estates and 10 industrial areas recommended by the Industrial Location Panel. Some area would also be required for large industries wishing to shift from the Island to the suburban areas, and some more may have to be kept reserved for future industrial expansion. We think the Municipality, should consider whether further additional area should not be made available for industrial use in the suburbs.

(g) *Satellite townships*.—In order to encourage the establishment of new undertakings outside Bombay and to provide incentives to the existing industries to go out of the Island, satellite townships should be located within a few hours' distance from the City of Bombay and in districts in the close proximity of Bombay, viz., Kolaba, Thana, Nasik and Surat. Rivers like the Patalganga and Kundalika offer considerable facilities for industries requiring large quantities of water. Possibilities of such rivers in the north should also be explored. Possibilities of developing facilities of minor ports in selecting sites for satellite towns should also be considered. The development of such towns within a few hours' distance from Bombay will have a very salutary effect not only in removing the existing congestion from Bombay but also in making the planned development of industries in these regions practicable. More detailed and specific recommendations regarding the satellite towns are made in the report of the Industrial Location Panel.

## 18. Development of Suburbs.

We have noticed in the foregoing Chapter how a strong predisposing circumstance for the overcongestion of population and industry in the island of Bombay has existed in the absence of, or tardy development of, facilities in the suburban areas, e.g., main roads and feeder roads, amenities like water supply, drainage and other civic services, medical and educational facilities.

The obvious remedy for combating the trend towards concentration of industry and population in the Island that suggests itself would, therefore, be the rapid and planned development of suburban areas.

There is extreme paucity of space in the Island of Bombay and in the main the housing programme for relieving congestion in the Island and making up the deficit of tenements will have to be located in the suburban areas. To this end energetic and co-ordinated steps will have to be taken for steadily opening out fresh tracts of suburban land and providing them with all the necessary civic amenities. No programme of expansion of housing can succeed except in such a context.

'Dormitory suburbs' are normally considered undesirable. If one were town-planning afresh, one would locate industry and residential areas for those working in the industrial units distinct and apart from each other but in close mutual proximity so as to avoid unnecessary long distance travel and the consequent evils of traffic congestion, etc. In the present undeveloped portions of the suburban areas, where one would be writing on a clean slate so to say, we would advocate that this must invariably be done. So far as the island area is concerned, however, this would not now be practicable.

(a) *Expansion of carrying capacity of railways.*—One of the most important requisites for developing the Suburban areas is the provision of adequate transport facilities. We have noted in paragraph 11 above how in spite of an increase in the number of trains the increase in the volume of traffic has outpaced this improvement with the result that the congestion on the trains is greater than ever. If the Suburbs are to develop adequately the Railways will have to provide all possible additional facilities for fast and adequate transport. We understand that the Railways have a programme for running more trains. They have also a plan for adding a few additional coaches to the suburban trains which will increase their carrying capacity substantially. This is not possible unless various ancillary measures like extension of certain station-platforms are undertaken. Moreover it is vital to the success of planned development of the City that transport facilities by Railways should precede and in some measure anticipate the demand for the carriage of passengers. We, therefore, recommend that the Railways should be urged to undertake these improvements to the maximum possible extent and with the highest measure of expedition.

(b) *Rail/Bus Concessions.*—In order to encourage a greater dispersal of the population in the Suburban areas we would recommend that it may be considered whether rail and bus fares could not be further "flattened out" on the principle of telescopic rates. It has been suggested for instance by the Housing and Housing Finance Panel that for encouraging wide dispersion in the Suburban areas a flat rate may be charged from Andheri to Bhyandar on the Western Railway and from Kurla to Thana on the Central Railway. These suggestions in our opinion merit early and serious consideration by the appropriate authorities.

It must be stated of course that, other things remaining the same, the wider dispersal of the population necessarily entails an increase in the volume of traffic. The suggested 'flattening' out of rates would also have a similar effect. We, however, do not contemplate that other things would remain the same. We have for instance recommended subsequently the setting up of an alternative business and commercial centre to the north of the island of Bombay which should avoid the need for the suburban population to undertake journeys to the Fort area across the whole length of the Island and should result in a corresponding reduction in the volume of incoming and outgoing Suburban traffic.

(c) *Need to expedite construction of Highways etc.*—It is necessary to proceed with the work on the Eastern and Western Express Highways with the greatest possible urgency and to complete them as programmed by the end of the Second Five-Year Plan period. In order to make available for development the adjoining areas

that would be opened out by these two Express Highways the Municipal Corporation should from now plan, and progressively undertake, the construction of the side-roads and cross-roads to provide access to the adjacent areas along and between the Express Highways. It is essential for the full use of these important traffic arteries that adequate Railway overbridges are provided to connect them to the existing road system in the suburbs. The planning of these should be taken up by the Municipal Corporation from now on so that their execution may synchronise with the progress of construction on the Express Highways.

We also recommend in this connection that the existing main roads in Greater Bombay should be sufficiently widened forthwith and brought up to modern standards to meet the increasing needs of growing traffic. Footpaths and pedestrian crossings should be provided on the more important of these roads wherever the volume of traffic would justify such a provision. A programme for connecting the main roads (as in the case of the Express Highways) in the Greater Bombay area with side-roads and cross roads must also be undertaken by the Municipality and completed as early as possible.

(d) *Neighbourhood units.*—In the suburban areas obviously development is likely to take place sooner round about the suburban railway stations. We commend in this connection the proposal made by the Housing and Housing Finance Panel for the establishment of neighbourhood units round-about suburban Railway stations like Andheri, Kurla, Malad, Chembur, Ghatkopar, Bhandup, Mulund, etc., making them, as far as possible, self-contained units with all day to day amenities for the local population. The starting of industrial estates and industrial areas elsewhere recommended for location in the Suburbs would be yet another important component of a planned programme for Suburban development.

Large financial burdens will fall on the Municipality if it is expected to incur the heavy capital expenditure entailed in the opening out and development of virgin suburban areas for building activity. On such opening out, the prices of land will appreciate and the individual land owners will appropriate an unearned increment of capital value. We consider this general issue in a subsequent paragraph of this Report. So far as the construction and the opening of new roads in the suburban areas is concerned we would recommend that provisions for the levy of "betterment" (on the usual accepted principles of betterment levy) on the plots which would appreciate in value thereby should be made to reimburse the Municipal Corporation. This could perhaps be done readily under the provisions of the Bombay Highways Act, 1955 by declaring such roads as "Highways" under the Act and the appropriate Municipal authorities as "Highway Authority". If the provisions

are, however, to apply more widely it would appear that a special enactment would be necessary to empower the Municipality to levy such betterment.

### 19. Extension of Suburban areas.

Large tracts of land would be made available for development in the suburban areas of the City and there is sufficient land available in the existing suburbs for the various requirements of the Island. However, suburban development will be greatly facilitated if, in addition to the existing suburbs, the opening out of other areas which are less distant than some parts of the existing Suburbs is also undertaken. These are the large areas available on the other side of the Thana Creek which could be opened out by constructing a rail-cum-road bridge across the Creek as recommended by the Communications and Traffic Panel.

Such a development on the mainland side within such a short distance from Bombay would have multiple effects. Firstly, it would relieve the pressure on the railways and the roadways that now have to move an enormous amount of traffic between the north and the south. Secondly, it would open up the possibility of a new township, which would, in time, not only draw away, from the island of Bombay, the overflow of the industrial units and residential colonies, but also enable the City to develop in an orderly manner. An area of about 25 sq. miles would be available across the mainland east of the Thana Creek, in the Thana-Belapur region upto the range of the hills beyond the Thana-Belapur road. The problem of water supply in this area is fairly easily tractable as stated in paragraph 20 of the Land and Open Spaces and Other Community Requirements Panel. Also further east, beyond the range and south in the Kolaba District, in course of time and as necessary, large areas could be opened out for development in the Thana Taluka of the Thana District and Panvel Taluka and Uran Mahal of the Kolaba District.

The Communications and Traffic Panel has referred to the possibilities of relief to the Bombay Port as well as to the Railways, by the creation of additional handling capacity by the development of another Port on the other side of the Thana Creek. This issue is, however, highly technical and hopes cannot be held out in this regard until the matter has been fully investigated. However, the case for the Thana Creek crossing is strong independently of such as yet unproved possibilities.

(a) *Rail-cum-Road bridge across the Thana Creek.*—It is strongly recommended, therefore, that the highest priority should be given to the building of a rail-cum-road bridge across the Thana creek

connecting the Island to the mainland. The bridge will have to be adequate for double tracks of railway lines and for four lanes of road traffic and for carrying the utilities necessary for the trans-creek development.

When the project for a Konkan Railway (Diva-Dasgaon Railway line) materialises, it might be possible with advantage to join up the northern end of the Railway line to this crossing across the creek so as to connect up directly to Kurla. If the trans-Thana creek suburbs develop along the mainland littoral across the Thana Creek, there might be possibilities of a suburban loop line from Belapur to Thana establishing a complete suburban circuit viz., Kurla-Chembur-across Thana Creek-north to Thana-and Thana to Kurla on the existing line.

A preliminary engineering survey of the Thana Creek crossing was done by the Ex-G. I. P. Railway Engineers. Considering the importance of the Project we would suggest that the necessary technical investigation may forthwith be undertaken to finalise the most economical location and design for this rail-cum-road bridge. As several interests would be affected by such a Project it might be advisable first to appoint a technical committee representative of the State Government, the Municipal Corporation, the Port Trust, the Railways and possibly the Navy to make recommendations in this behalf.

An important technical consideration which requires careful attention in this connection is the location of the Thana Creek crossing in such manner that it does not affect adversely the problem of siltation in the Bombay harbour. Possibly some experiments at the Khadakvasla Experimental Station would be needed to fix the best alignment from this point of view.

After the technically best solution is arrived at, the State Government should take a lead in settling the financial arrangements for the construction of this bridge with the interested authorities. We hope that in addition to the finalisation of these arrangements steps would also have been taken for preliminary investigation and survey with a view to finalising the design of the bridge before the commencement of the Third Five-Year Plan. We would expect that this project would find place in the Third Five-Year Plan and having regard to the urgency of the matter that the work will be commenced and finished well before the end of that Plan period.

Obviously the actual construction of the Thana Creek bridge will not have been completed for about 5 years from now at the very best. It is necessary to consider whether any measures for the interim are practicable.



(b) *Ferry service across the harbour.*---At present there is a ferry service between Bori Bunder and Uran on the other side of the creek. One of its greatest short-comings is that the service is suspended in the monsoon. We would suggest to the authorities that the feasibility of a regular all the year round service across the harbour ought to be explored.

The problem of finding open spaces for the requirements of the island population and the problem of discongesting the island of some of its excess population would be greatly eased and facilitated if over and above existing suburban areas the other large areas available on the other side of the Thana creek are opened out by constructing a rail-cum-road bridge across the creek.

(c) *Bridge over the Bassein Creek.*—The early construction of a road bridge across the Bassein creek in the north at the extremity of the Salsette Island, which is already projected as a part of the Bombay-Ahmedabad National Highway, will also open out fresh areas for the trans-suburban development.

We would recommend, therefore, that the construction of this crossing should be undertaken without delay and in continuation of the Western Express Highway. As it is already a part of an accepted National Highway project, there should be no difficulty in making a beginning on it straightaway.

The construction of the projected bridge over the Bassein Creek and of a rail-cum-road bridge over the Thana creek will not only open up new areas for industrial development and absorption of the increasing population of Greater Bombay, but will also provide the links that have been missing so long between Greater Bombay and the mainland on the East and to the North.

The opening out of the trans-Suburban areas would be beneficial to the Greater Bombay area in multiple ways. It would help to relieve the over-burdened north-south traffic; it would provide a convenient location for the hoped-for-spill-over of industrial units and residential areas from the main Island and help in discongesting the Island. By opening out wide areas for further development on the mainland these links will provide unlimited possibilities for dispersion of industry at appropriate distances from the industrial and commercial nexus of Bombay City.

## 20. Alternative Centre of Business.

Geographically the Island of Bombay is about 10 miles long north-south and about  $2\frac{1}{2}$  miles wide east-west. There are a limited number of lines of communication north to south due to the configuration

of the Island. There is concentration of business, commercial, banking governmental and court activities towards the south of the Island. As we have already noticed elsewhere there is a tremendous concentration of Industry in the area of the Island; the island accounting for 76 per cent. of the registered factories and 85 per cent. of the labour employment in the Greater Bombay area. About 57 per cent. of the factories are located in a more or less contiguous area ranging from Dadar in the north to Carnac road in the south. All these circumstances result in creating large volumes of concentrated one way traffic towards the south in the morning and towards the north in the evening. The absence of suburban development also results in the suburban population having to go for many occasions, apart even from employment and business, to the Island of Bombay and specially the business area in the southern localities of the Island. To cater for these enormous streams of traffic there exist today only two main north-south roads—one along Gokhale Road, Cadell Road, Annie Beasant Road, Love Grove Road, Peddar Road, Opera House, Marine Drive or Queen's Road, and the other, Vincent Road, Parel Road, Victoria Garden Road, Ibrahim Rahimtulla Road, Mahomed Ali Road and Dadabhoy Naoroji Road. Traffic congestion is the concomitant of population congestion, and population congestion is the resultant of traffic congestion. It is obvious that if movements were free, fast and reasonably cheap, there would not be any necessity to conglomerate within the Island of Bombay in close proximity to places of work. It is also equally true that if residences and business houses and industrial units were at least in part placed in the suburbs, the congestion in the Island would not be heavy as it is today.

One of the important measures which would help in discongesting the island of Bombay and relieve to some extent the flow of traffic towards the south would be to establish another new centre of activity in the central part of Greater Bombay, say in the Bandra-Kurla area where some of the important Government offices, banks, commercial and industrial houses, possibly also new educational institutions, insurance offices and market places should be located in order that, at any rate, those people who may find employment in this centre or may have business calls to make there, may not have to travel long distances from north to south as at present in the mornings and in the reverse direction in the evenings. Development of such an alternative centre somewhat on the lines of what Connaught Circus and its environs are in New Delhi, as an addition to the original commercial and business centre in old Delhi, is a clear necessity for the future planning of Greater Bombay. The Bandra-Kurla region bounded on the west by the Western Railway line, on the north by the Santa Cruz Air Port, on the east by the Bombay-Agra road and on the south by the Mahim creek together with some of the open areas immediately south of Dharavi would probably

furnish the best location for such an alternative centre of business. This commercial and business centre would be conveniently located for the traffic coming from the North, South and the East. This would also ease the pressure on the lines of communications which are presently subjected to great stress and strain. The Bombay Municipal Corporation has also prepared an outline of a scheme for reclaiming and developing this area after discussion with Dutch experts and there is a project we understand of the Municipality to take up this scheme by stages.

Both the Housing and Housing Finance Panel and the Land and Open Spaces and other Community Requirements Panel have recommended the establishment of such an additional business centre.

The Central and State Governments and the Bombay Municipal Corporation can encourage development of such a new centre of activities, among other things, by locating whenever possible their new Government offices and residential quarters in this area. Already a large house building programme by the Bombay Government and the Bombay Housing Board has been undertaken in this area. The proposed construction of the Western Express Highway which passes through the western boundary of this area, the growing development of a part of this area as a Bombay Government housing estate and as one of the housing centres of the Bombay Housing Board, and the availability of large areas of Government land in this tract (although some filling would be necessary in many cases) make such a development more easily practicable. A full-fledged scheme should be drawn up by the Municipality for establishing such a centre in this locality in consultation with the other authorities and in conjunction with its scheme for reclaiming the area. If the creation of such a Centre is sponsored by public authorities, the commercial business houses, banks, insurance offices and educational institutions are likely to follow the lead. The creation of such an alternative Centre will serve multiple purposes redounding to the betterment of the city from many points of view.

The Land and Open Spaces and other Community Requirements Panel has also, in this connection, stressed the necessity of expediting the shifting, by the Corporation, of the Slaughter house at Bandra to the proposed new site at Devnar which has been under contemplation of the Municipal Corporation for quite some time now. We refer to this item in more detail elsewhere. In the present context it may merely be noted that the land that would be available if the Slaughter house is shifted may possibly be found very suitable to enable an immediate beginning to be made towards the establishment eventually of a business-cum-commercial centre in this area.

In addition to the business centre proposed in the Bandra-Kurla region, it would be desirable to reserve adequate areas under the 'development plan' (under the Town Planning Act, 1954) which is under the preparation of the Municipal Corporation for the eventual establishment of a market centre further north in the Salsette Island. The creation of neighbourhood units near the railway stations like Andheri, Kurla, Malad, Vikhroli, Bhandup, Mulund, etc., suggested elsewhere would also help gradually in localising the activities of the residential population of those areas and reducing thereby the congestion resulting in the movement of traffic from north to south and *vice-versa*.

## 21. Reclamation of Land.

The Land and Open Spaces and other Community Requirements Panel have cast a rough budget showing therein on the one hand the availability of land and on the other the requirements of land against such availability, for essential community purposes within the Island of Bombay. The extremely difficult position about land in the Island of Bombay in particular localities is manifest therefrom. Fortunately, however, there are very promising reclamation possibilities, both in the south and more especially in the north and east of the Island of Bombay.

Normally of course if we were writing on a clean slate one would not envisage extensive reclamations of land at considerable cost. Fortunately however some of the reclamation schemes, especially the reclamation in the Wadala area, are not expensive. If there had been timely control and regulation over the development of the Bombay conurbation, the use of the available land would have been rationalised; reservations for essential community requirements would have been made as the urban development spread out and it would probably not have been necessary to contemplate extensive reclamations of land from the sea. However, given the present conditions in which the limited land area of Bombay Island has to support a heavy concentration of Industry and population and given further the prospect that any discongestion of industry in the Island and reduction in the present population of the Island area is going to be an extremely difficult, complex and unpredictable undertaking; it follows that it is essential for securing relief in the existing situation to undertake reclamations wherever practicable for increasing the pool of available land within and in the immediate vicinity of the island of Bombay.

The various schemes for reclamation are enlisted in paragraphs 19 and 28 of the Report of the Land and Open Spaces and Other Community Requirements Panel. Amongst these we might particularly

notice the following reclamation proposals relating to large areas of land :—

(i) The remaining blocks of the Colaba Reclamation Scheme-Block Nos. 3 to 6 : 575 acres.

(ii) Area bounded by the Western Railway on the West, Santa Cruz Airport on the North, Bombay-Agra Road on the East and Mahim-Dharavi Road on the South : About 2,135 acres.

(iii) Creek between Wadala and Chembur : approximately 2700 acres.

So far as the Colaba Reclamation area is concerned, the remaining blocks are a part of the unfinished scheme of the late Development Department. A part of sea-wall for the completion of these blocks of reclamation is already constructed. Some portion on the northern fringe of block No. 3 has been reclaimed in recent years by the depositing of the debris obtained from the collapse or demolition of buildings. This rate of reclamation, however, is extremely slow. Having regard to the acute paucity of land in the Bombay area and the great relief that the reclamation of these 500 odd acres would give, especially to the congested localities immediately to the north of the Fort area, we think that it is necessary for Government to examine the whole issue of this reclamation and initiate steps for its early accomplishment. We understand, in this connection, that there are possibilities of obtaining dredged material from the dredging operations to be presently carried out by the Port Trust authorities in the Bombay Harbour area. If this dredged material is available for depositing in these reclamation blocks, the reclamation of the area will be greatly speeded and facilitated.

As regards the second reclamation scheme mentioned above, as stated elsewhere, we understand that the Municipality already have got a project for carrying it out by stages by the Dutch method of reclamation. The reclamation of this area as well as of the Dharavi area to the immediate south of it beyond the Mahim Creek is reckoned in many ways to bring in very beneficent results to the City. The proximity of this land to the Island and its central position between the north-eastern and north-western suburban areas are factors of great locational advantage. Besides, on reclamation, this area could be made the seat of an alternative business and commercial centre which would immensely benefit Bombay's layout in many ways. We recommend that the scheme should be taken up for execution immediately and accomplished in a phased manner.

As regards the third large block of reclamation area, while the possibilities of reclaiming this area are promising, we are not aware that any concrete scheme has been drawn up in this regard so far.

One of the important points to consider in this connection is the removal of salt pans from this area. We refer to this particular aspect of the problem of reclamation in a subsequent Chapter of this Report. We may, however, here anticipate the conclusion reached therein that there are no insuperable difficulties about removal of salt pans in the Bombay area. The quantity of spoil needed for filling this area will have to be estimated and the most convenient borrow areas also located. In the absence of any definite data regarding this it is difficult for us to say this with confidence; but as these areas are generally shallow and as in large portions of them only the high tide tidal waters come in, the quantity of filling necessary is not likely to be large. Also both for the Bandra, Kurla area and this block of land, the problem of filling does not raise the issue of bringing spoil by trucks across congested streets as would have been the case for the Churchgate reclamations if dredged material from across the harbour was not available. We recommend that the reclamation of this block should be further surveyed and a definite project should be drawn up and undertaken by the concerned authorities at a very early date.

All these three blocks lying just on the periphery of the Island are very conveniently situated, with reference to the congested industrial and residential areas in the centre and to the north of the Island. The possibilities for securing open spaces in the congested localities of the Island are very limited. If these large blocks of land on the periphery become available it will be possible to eke out the shortage of space for community requirements for the Island community, by providing for some of these in the peripheral reclaimed areas. The problems of providing housing at a convenient distance for the slum dwellers in the Island as well as for making up the deficit of housing accommodation against the requirements of the present population of the Island area will also be greatly facilitated by these reclamations.

As for the agency for carrying out the reclamations, apart from such reclamation as Government, the Municipality or other Public Authority may find it practicable to undertake themselves, or for which they may be specially advantageously placed to undertake, the possibility of enlisting private enterprise for the purposes of such reclamation ought to be explored. Additional land is urgently needed within the island and in its close proximity for relief of the island population. It should be possible to supplement Government and Municipal efforts by awarding to private parties on a competitive basis reclamation of sites on suitable terms and subject to suitable safeguards regarding the prices to be charged for the land thus reclaimed.

Amongst our recommendations for the improvement of conditions in the Island area we rate these reclamation proposals very high. Many of the ills of Bombay's civic life spring out of sheer lack of space in the Island area. These reclamations on the periphery of the Island will furnish to the authorities a considerable pool of additional open space with which it should be possible largely to resolve and overcome the defects and deficiencies that long years of "Drift" and lack of planning have imposed on the Island population. Apart from providing space for public housing and slum clearance and to eke out the open space needs of the Island, the command over this considerable land resource will furnish to the town-planning authorities a valuable strategic weapon for offering "relocation sites" to induce the thinning out of the congestion in the Island. While the need for land for community requirements in and near the Island of Bombay is indeed desparate, quite large areas are available for reclamation within or in the immediate periphery of the island and, therefore, competently and energetically handled, the situation is not so hopeless and beyond retrieve, as may appear at first sight.

## **22. Planned Programme of Public Housing.**

We have seen in the foregoing Chapter how there exists at present the enormous deficit of three lakhs of tenements in housing accommodation in the Greater Bombay area, without reckoning the need for replacement of dilapidating houses and to accommodate the further growth in population; we have also noticed how the making up of this housing deficit is beyond the scope and reach of private house-building activity. It is evident from this analysis that the housing problem in Bombay City, especially for the middle and lower income groups and the working classes, cannot be solved unless *a massive programme of public housing is undertaken.*

It may be further recalled in this connection that the analysis of the population of Bombay reveals how important the categories of (a) public employment, and (b) industrial employment are, as components of the total population. Public employment accounts for 2.6 lakhs of families; 4.45 lakhs of persons find employment in organised industry. Having regard to this, it is evident that in any programme of public housing, the provisions for housing for employees of public authorities and the provision of housing for industrial labour will have to constitute very large components of the housing programme.

So far as public authorities are concerned, we strongly recommend that in the special conditions of the Greater Bombay area it is essential that the Central Government, the State Government and other public authorities unambiguously recognise their responsibility

for providing housing within a reasonable period of time to a substantial portion of their employees, especially of the lower income brackets.

This has already been done in part by some of the public authorities. Some 18,000 units have so far been provided by the Central Government, the Railways and its statutory corporations ; a thousand units have been provided by the Reserve Bank ; some 25,000 odd units have been provided by the Municipal Corporation, including those built by its old Improvement Trust ; and so on. We understand that the Bombay Government has accepted in principle a programme for putting up additional 7,500 tenements for their Class III and Class IV employees during the remaining period of the current Plan, and has already put up and has under construction several hundred tenements. We further understand that in fact schemes for provision of housing accommodation by several Central Government Departments have been held up or retarded due to want of suitable land for putting up their housing projects. It is obvious, therefore, that the different public authorities have already acknowledged in principle their responsibility for providing departmental housing for a proportion of their employees. We would suggest in this connection that an organised and concerted programme phased over say a period of 10 years or so should be drawn up in agreement with all the concerned agencies. Obviously the State Government will have to take a lead in this regard.

Apart from departmental housing for its own employees the late Development Department of the State Government had put up 16,000 tenements before 1925 and after 1947 the Bombay Housing Board has so far constructed about 18,000 tenements for industrial workers amongst others. The tenements of the old Improvement Trust also referred to above are in occupation of other tenants and cannot be counted as available for the departmental housing of the Municipal Corporation.

(a) *Housing for Industrial Labour*.—It is obvious that apart from departmental housing for their own employees by public authorities, a substantial component of the public housing programme will have to be in respect of industrial labour. On account of certain facilities and conveniences appertaining to the Bombay area, industrialists have congregated their industrial activities in this region. Indeed for the same reasons, there is a great reluctance on their part to move out of this region. It is but fair, therefore, to request them under these circumstances, to accept some responsibility for assisting in the solution of the housing problem that has been created or at least greatly accentuated by their operations. We may add that the law has recognised this obligation so far as the construction of houses for the workmen of new industries is concerned.



It has been the policy of the Bombay Government while granting permission for the erection of factory buildings under the Bombay Building (Control on Erection, Re-erection and Conversion) Act, 1948 to impose a condition for building residential tenements for 40 per cent. of the labour employed by a new unit and of the additional labour employed by an existing unit if the additional number employed exceeds twenty.

While this statutory requirement has existed in theory over the last so many years, we understand that it has not been possible to implement it for various reasons. Obviously it is not a satisfactory state of affairs that there should exist a statutory obligation and that nevertheless it should not be implemented in practice. If there is a case for reducing the size of the obligation or for limiting its character, that may be done; simultaneously any loopholes and difficulties in enforcing it should be removed. The whole position seems to stand in need of rationalisation. As stated elsewhere, the entire question of imposing a compulsory obligation on the employers to build houses for their workmen requires to be examined from a number of view points.

As stated by the Housing and Housing Finance Panel as at present some 6,700 tenements have been provided by various employers, including the textile mills. This figure includes a total of 2,000 tenements so far put up by employers under the subsidised industrial housing scheme of the Government of India. It is evident that the provision of housing for industrial labour has to be very much larger if an adequate public housing programme is to be drawn up.

This problem of provision of housing by employers for their industrial labour is riddled with many difficulties, relating to agency, provision of capital cost, burden of recurring cost etc. The Study Group have examined these difficulties elsewhere in the Report (Chapter VI, paragraphs 55 and 56) and made their suggestions thereabout. Here it is relevant merely to emphasise how essential it is to evolve a proper scheme in this regard in consultation with all concerned interests so as to draw up and implement a programme for the housing of industrial labour commensurate to the size of this problem.

(b) *Tentative programme of Housing.*—While variations of details could be easily suggested, and while of course in any case such a programme must be settled in full consultation with all the various authorities whose participation is presumed therein, we consider the broad outlines of the programme of public housing drawn up by the

Housing and Housing Finance Panel as both appropriate and practicable. The details of the programme as suggested by the Housing and Housing Finance Panel are reproduced below :—

Agencies that should build the 3 lakh tenements in the 12 years that is 25,000 tenements per year :—

The Bombay Housing Board ... 6,000 tenements mainly for industrial workers and partly for persons coming under low income group.

The Municipal Corporation, 4,000 tenements for their own employees. the State Government, the Central Government, the Central Railway and the Western Railway together.

Individuals and Co-operative Societies. 2,000 tenements for themselves and their members.

The Central and the State Governments. 8,000 tenements for housing employees of industrial and commercial establishments other than those provided for by the Bombay Housing Board.

Private Investors ... 5,000 tenements for middle class people.

25,000

(N.B.—An individual coming under the low income group category is one whose monthly family income is less than Rs. 500).

Thus the total number of tenements to be built per year will be 25,000. They will aggregate to 3 lakh tenements in the course of the next 12 years ending with the year 1970.

It is estimated that provision of 25,000 tenements including the 5,000 to be built by private investors for middle class people would cost about Rs. 20 crores on the basis of the cost of two living rooms and a kitchen.

The total finance required for 12 years will, therefore, come to Rs. 240 crores. It is estimated that the finance that will be required by the different agencies mentioned above will be as follows :—

Name of the agency. 1	Amount of finance required. 2	Source of Finance. 3
I. The Bombay Housing Board.	Rs. 4.25 crores for industrial workers on subsidised rent.	From the annual budgets of State and Central Governments.
Do. ...	Rs. 0.50 crores for people of low income group on economic rents.	
Do. ...	Rs. 0.25 crores for site development.	
Co-operative Housing Societies and Individuals of low income group.	Rs. 1.50 crores.	

Name of the agency. 1	Amount of finance required 2	Source of Finance. 3
State and Central Governments and semi-Government bodies including statutory Corporations.	Rs. 3.00 crores for housing their own employees.	
	<u>Rs. 9.50</u>	
II. Central and the State Governments.	Rs. 5.75 crores for housing employees of industrial and commercial establishments.	To be raised* by borrowing from the market.
Private investors ...	Rs. 2.75 crores for housing middle class people.	From their own resources.
Private investors ...	Rs. 2.50 crores for housing middle class people.	Out of borrowing from financing Agencies.
	<u>Rs. 20.50</u>	

We have set out above how a practicable programme of public housing could be organised and computed illustratively by the various components that would have to make it up. This however, does not mean that we advocate the *segregation* of the classes concerned i.e. physically separate colonies of public servants; separate neighbourhoods of industrial labour and so on. The actual placement of the public housing blocks is a matter of social policy.

Our computations would be consistent with any pattern that is considered socially desirable.

### 23. Regulation of the use of Land.

The Land and Open Spaces and other Community Requirements Panel have cast a rough budget of the land requirements for community purposes within the Island of Bombay. It is seen therefrom how little unbuilt area is available within the Island and how short the Island population is of open spaces for essential community requirements.

Owing to the lack of sufficient space in the Island area we have suggested that the bulk of the housing programme hereafter will have to be located in the Suburbs; we have also recommended the undertaking of extensive reclamations in the peripheral areas of the Island to increase the pool of available land. Concurrently and

\*As regards finance and agency for this item, other recommendations are made by the Study Group at paragraphs 55 and 56 of Chapter VI.

additional to those measures it is necessary to provide for regulation of the use of the existing open land in the Island area and the land that will in future become available,

Notwithstanding the reclamation of the peripheral areas and assuming the maximum overspill of the Island population and industry into the Suburbs, it is obvious that there is an irreducible core of local requirement of space which must be found in the close proximity of the particular areas for which the space is required. If the Island population is to be served in this respect to anything like a reasonable extent it is necessary to control closely the future land use of the existing open spaces or the spaces that would be released hereafter.

(a) *Suburbs*.—So far as the requirements in the Suburbs are concerned the computations made by the Land and Open Spaces and other Community Requirements Panel show that there is sufficient land available for the Suburban needs as well as for the overspill requirements of the Island. Here also if conditions similar to those in the Island area are not to be repeated it is essential that land use is regulated from now on. So far as the Suburban areas are concerned since the basic resource of land is available in sufficient plenitude, what is necessary is to lay down merely a 'planning grid', that is to say a general frame-work of reservation of areas under broad zonal arrangements laying down the principal communications system, etc. As and when any particular locality comes up for development more detailed planning of the land use of that locality can be framed and enforced.

(b) *Island*.—Within the Island area, however, it is essential to undertake a comprehensive land use survey and analysis forthwith and to prepare a detailed and specific plan for future land use making allowance for the requirements of the community. The position about land in the Island of Bombay is so difficult that the provision of land necessary for even priority requirements of the different neighbourhoods within the Island will not be practicable unless (a) steps are taken for earmarking land required for community requirements; (b) for appropriating towards such requirements such sites as they become available.

It may be observed for instance that when houses collapse or have to be pulled down from amongst the large number of dilapidating houses computed by the Municipality to total to a figure of 18,000 it may be possible to provide for a local community requirement like land for a school or a playground, by appropriating the whole or a part of the released land towards such a purpose. Likewise, when the slum localities in the Island are cleared up in the Slum Clearance Schemes of the Corporation it may be possible to appropriate a portion of the land released from the slum area (particularly in the case of

unbuilt slums, wherein due to storeyed construction there should be scope for economy in the use of land underlying the slum) towards satisfaction of local community requirements.

To carry out such a policy the following steps are necessary :—

- (i) A detailed survey of land use as at present.
- (ii) An assessment specifically of requirements for future land use of localities.
- (iii) Designation of specific plots for particular requirements to be so appropriated as they become available.
- (iv) Powers to enable the local authority to appropriate such land towards such purposes as and when opportunity offers on payment of appropriate compensation.

Fortunately the coming into force from the 1st April 1957 of the Bombay Town Planning Act, 1954 in the Greater Bombay area has now vested the necessary powers in the Bombay Municipal Corporation to implement such a policy of land use.

(c) *Development Plan under the Town Planning Act, 1954.*—Under the Bombay Town Planning Act, 1954 every local authority has to carry out the survey of the area within its jurisdiction and, within 4 years of the date of the Act coming into force (1-4-57), publish the development plan and submit it to the State Government for sanction. The Bombay Municipal Corporation has very recently declared its intention to prepare such a development plan for Greater Bombay. The development plan is to indicate the manner in which the development and improvement of the entire area within the jurisdiction of the local authority is to be carried out and regulated. In particular the development plan is to contain the following proposals namely :—

- (i) proposals for designating use of the land for the purposes such as residential, industrial, commercial and agricultural.
- (ii) proposals for designation of land for public purposes such as parks, play-grounds, recreation grounds, open spaces, schools, markets or medical, public health or physical culture institutions, etc.

Section 11 of the Act empowers the local authority to acquire any land designated in the development plan for purposes specified in clause (b) etc. of Section 7 of the Act. There are provisions in the Act to prevent property owners taking any action with reference to their properties contrary to the requirements of the development plan.

The Land and Open Spaces and Other Community Requirements Panel have reckoned, as they say on a very conservative estimate, that the probable minimum requirements of land for essential community purposes within the Island would be of the order of about 14 or 15 hundred acres. A phased programme for the acquisition of

land at the rate of 100 to 120 acres a year over a period of 10 or 12 years would have to be adopted to complete the total acquisition necessary. Under the Bombay Town Planning Act, 1954, a course of action is feasible to the Corporation whereunder it could designate the land required for particular purposes and ensure that it is not appropriated for other uses until it is acquired by the local authority for the appointed use.

The cost of acquiring about 120 acres of land annually is, however, going to be enormous at the present prices.

(d) *Compensation for land to be acquired.*—The Local Authority will have to meet this call in addition to the many other developmental calls being simultaneously made on it, e.g. developing large blocks of land to make them ready in advance of the spread of house-building activities; clearance of slums and re-housing of slum-dwellers; improving the communications system and so forth. It is going to be a gigantic task for the local authority to finance all this expenditure. It might, indeed, be found altogether impossible if in addition to the many other calls the local body has to make payment of land compensation at the present market prices and in one lump sum. We, therefore, feel that for the land designated for *all public uses* under the development plan which is being prepared by the Bombay Municipal Corporation, compensation should be made payable at the rate prevailing on 1st January 1948 just as it is being done in the case of acquisition of land for *housing schemes* under the Land Acquisition (Bombay Amendment) Act, 1948.

The Land and Open Spaces and other Community Requirements Panel have computed that even with reference to price of the year 1948 the cost of acquiring about 120 acres per annum would be of the order of not less than 180 to 240 lakhs.

Thus even if a phased programme for acquisition of this land is adopted, (and even if the compensation payable is on the 1948 valuation), it will still be far too heavy a burden on the local authority, in our opinion, to make provision for payment of all the sums due for the compensation payable for the 100 to 120 acres of land annually as mentioned above, in addition to the other expenditure which it may be required to incur for other developmental purposes. We think, therefore, that provision should be made to spread the payment of compensation for such land over a number of years, exceptions being made, if necessary, in the case of petty owners of land receiving small sums in whose case payments could be made in lump sums up to a certain amount. Such a course of action has been adopted among others by the Uttar Pradesh and other Governments in connection with the abolition of Zamindari under the Zamindari Abolition and Land Reforms Acts.

Our colleagues Shri Master and Shri Apte, however, disagree to these two suggestions relating to the assessment and phased payment of the compensation. They feel that if the compensation payable is to be "pegged" it should be with reference to the date of the new enactment so far as the "public purposes" other than "housing" to which the law has not so far applied are concerned. As regards the payment of compensation they feel that a provision for such phased payment even for the larger amounts is neither just nor necessary. In their opinion the Municipal Corporation should be able to raise the capital funds necessary for discharging the usual responsibility of an acquiring authority to pay compensation at the time of the acquisition itself.

We are however all agreed that when our proposals for construction of the Thana Creek crossing materialise steps would be simultaneously necessary for ensuring that the incidence of any speculative increase in land prices on the other side of the Thana Creek does not have to be borne eventually by public funds when public authorities are called upon to provide for the essential requirements of the community settled there.

#### **24. Forecast of Ultimate Population of Bombay Island.**

In the Master Plan of Bombay City prepared in 1947, estimating the population inhabiting the island at 23 lakhs, the Master Planners assessed that the island area was adequate for housing in reasonable conditions a population of approximately 13 lakhs. They, therefore, advocated discongesting of the island to the extent of ten lakhs of population. It is obvious that with the figure at which the population of the island stands at present namely over 30 lakhs, it is difficult to envisage a reduction in this population to the order envisaged by the Master Planners.

While it is evident to us that a measure of discongestion of the population from its present intolerable figure must be pressed for, we are not oblivious to the difficulties in the way of achieving this in practice. The extent of discongestion will depend upon the speed and efficacy of measures adopted for :—

- (a) encouraging suburban development ;
- (b) bringing about relocation of industrial units outside the island.

Both these measures would necessarily be spread out over a space of time. Some further relief might also be forthcoming from relocation of Government offices and establishments outside of Bombay City.

Having regard to the complexity of these measures, and uncertainty of the response to them, it is not possible to predict the extent of discongestion that could be achieved. While, therefore, we strongly advocate measures :—

(a) for preventing further congestion in the city ; and

(b) for attempting all possible discongestion of the existing population of the island ;

it would be profitless for us to base our calculations about their requirements of open spaces etc., on the basis of some hypothetical figures (of the order of 20 lakhs or so as sometimes suggested) as the ultimate population of the island.





## CHAPTER V

### CERTAIN ANCILLARY MEASURES AND CONNECTED ISSUES

#### **25. Developing a thousand acres of building sites per year.**

We have elsewhere recommended an ambitious programme of house building activities with a large component of provision of housing by public authorities therein. One of the retarding factors in this regard as at present (and indeed for co-operative as well as private house building as well) is the paucity of suitable plots for house building. The Municipal Corporation will have given a big lead to this housing programme and to the general promotion of housing activity if they will undertake to provide suitable areas of building plots ahead of the constructional activity. We reckon that if the Corporation were to aim steadily year after year to make available with necessary services of drainage, water supply and other public utilities tracts of land totalling to about a thousand acres of building sites that would just about adequately meet the requirements of the situation. To quote only one instance, as at present, we understand a very considerable programme of house building by Departments of the Central Government has been held up and retarded by the difficulty of obtaining suitable developed housing sites.

The provision of developed land (not necessarily of the Municipal ownership itself but served by the Municipal and other utilities) ahead of the house building activity is to the advantage of the Municipality both from the point of view of municipal finances and from the more important point of view of the development of the City.

We learn from the Municipal authorities that the cost of developing a thousand acres per year would be of the order of a crore and a half. The cost has been computed on the basis that the internal services within layouts of 5 acres and less will be provided by the owners who get the lay-outs sanctioned as indeed such persons are responsible for doing.

#### **26. Underground Railways.**

We have been specifically asked to "examine the scheme for underground railways for relieving congestion in the central and southern areas of the Island."

The particulars of the scheme fully prepared by the Japan Consulting Institute for the Bombay Electric Supply and Transport Undertaking are as under. It envisages an underground railway costing Rs. 28.50 crores and covering a total distance of about 8 miles in the area south of Bellasis Road in two stages as under :—

#### STAGE I.

- |                        |                      |
|------------------------|----------------------|
| (1) Museum.            | (6) Crawford Market. |
| (2) Sachivalaya.       | (7) Pydhoni.         |
| (3) Churchgate.        | (8) J. J. Hospital.  |
| (4) Flora Fountain.    | (9) Clare Road.      |
| (5) Victoria Terminus. | (10) Bombay Central. |

#### STAGE II.

- |                        |                     |
|------------------------|---------------------|
| (1) Ballard Estate.    | (5) Opera House.    |
| (2) Victoria Terminus. | (6) Grant Road.     |
| (3) Dhobi Talao.       | (7) Bombay Central. |
| (4) Thakurdwar.        |                     |

Total length of I and II Stage ... 13,567 meters i.e. 8.3 miles.

Cost of the I and II stage as estimated by the Consulting Engineers was Rs. 16.05 crores and Rs. 12.55 crores respectively. In view of the fact that the scheme is meant to serve only a limited portion of the area in the south of the island it will facilitate the circulation of traffic in this part but make no difference to the enormous volume of traffic to and fro, North-South arising in the morning and evening daily. The limited underground railway schemes are designed only to be palliatives to traffic congestion in certain parts of the island. They are not related to the basic issue of discongesting the island or of reducing the intractable volume or inconvenient directions of its traffic. Such a scheme is, besides, likely to create traffic problems in the central part of the island.

The other underground railway proposals have also been examined by the Communications and Traffic Panel. Having regard to the very high cost of these schemes whether they are undertaken for a limited underground service in the south of the Island or for a slightly more extensive service over a somewhat larger area, the Study Group is of the opinion that there is no case for undertaking any, such *limited* underground railway proposals.

The proposal for an underground railway right from Sion to the Fort area would stand, however, on a different footing. It would be designed to improve the speed and capacity for carrying traffic

north to south across the entire length of the Island. It is likely that even with the development of Suburbs as we envisage there would still arise so much traffic between the various suburbs and the metropolitan areas of the Bombay island that the present over-ground arteries-rail and road—would be unable to cope with it even as they are grossly inadequate to the requirements today. There is very little scope for widening the capacity of these arteries and it is therefore desirable from now to think and plan for an underground railway if rapid transport across the length of the Island is to be made available. Such a proposal we are told, would involve an investment close upon a hundred crores. It is felt, however, that even this large investment would be found to be ultimately remunerative.

By the time such an ambitious project comes up for execution the effects of the efforts made for promoting suburban development in the Salsette Island and on the mainland and its incidence on the traffic volumes would have been observed. It must be remembered that a project like this will require extensive survey and investigation which has not been undertaken so far. Difficult technical problems of construction, alignment, safety of overhead structures, etc., would need to be studied for the purpose. The Study Group recommends that these investigations and surveys from the technical as well as other points of view may be undertaken at an early date and a well thought out scheme for an Underground Railway should be prepared for consideration in the near future.

## **27. Vertical Development.**

It is obvious, having regard to all circumstances, that vertical development must be countenanced within the island of Bombay and to some, though probably to a lesser extent in the suburban areas.

We understand that the Bombay Municipal Corporation have recently reviewed their regulations in respect of vertical development in some cases and permitted additional storeys or additional maximum heights of buildings. It would appear, however, that there is room for further reviewing on the same lines, both for the suburban areas and in the island of Bombay, the Municipal regulations relating to the height of buildings. We would recommend that this important problem which has a direct bearing on the immediate facilitation of private constructional activity receives the close attention that it merits.

Considering the pressure on land in the whole of Bombay area and more especially in the island of Bombay any economies in land use that might become practicable as a result of a review of the regulations relating to vertical development must be welcomed; nevertheless, there are certain limitations in this regard which must be borne in mind.

One of the important limitations on possibilities of vertical development in the island of Bombay in the present conditions, is the limit imposed by the road system, the size of sewers and water mains and other utilities. It is quite true that if house-building was undertaken on modern lines with adequate open spaces to surround multi-storeyed buildings there would be a measure of economy in the use of land without peril to sanitary requirements in respect of light, air, ventilation, etc. While undoubtedly there is some scope for obtaining a measure of relief by providing for such vertical development subject to suitable safeguards, in view of the limitations imposed on the density of population (already very high in large parts of the island) by the capacity of the road system and public utilities, we do not anticipate that any very large areas of land would become available by permitting such vertical development.

Wherever by relief sewerage or by increasing the capacity of the water mains over sections where it is feasible, there is possibility of allowing vertical development in particular areas it should of course be done. While this would bring relief to particular districts, the main conclusions relating to the budget of land, especially within the island, would remain unaffected by any marginal economies of space that might become available over-all thereby.

### **28. Full Utilisation of Building Sites.**

A certain amount of land in the Bombay Island area is at present less than fully used. That is to say, it is built up to a much smaller height than permissible. No precise statistics regarding the extent of such built up areas and how much further housing accommodation would be available by building them to the full height permissible is available. However, from inquiries made by the Collector of Bombay at the instance of the Study Group, it appears that the area of such building plots in the Bombay Island which are built up to one storey only totals to something of the order of 166 acres and of the plots with katcha structures or huts to about 118 acres.

In general terms we would recommend that measures may be taken for the full utilisation of building sites within the Island at present left unbuilt or inadequately built over. Apart from such of this land as may be reserved for community purposes and, therefore, must not be built up, incentives (e.g., making long term finance available) should be devised for encouraging the building up of such plots where they are left open or are only partially built over. Should such inducements fail to bring about the desired construction it is possible that other measures may have to be thought of in suitable cases.

## 29. Repairs and Restoration of old Buildings.

According to a Municipal estimate there are some 18,000 old buildings comprising 1,61,300 tenements in the Greater Bombay area. It is reckoned that 6,000 of such buildings comprising 57,000 tenements will finish their useful life within the next five years and that there are no possibilities of salvaging these buildings.

So far as the remaining 12,000 buildings are concerned it is obviously necessary that steps must be taken for their timely repair and restoration. They are an important constituent of the already inadequate stock of housing accommodation available in the city. We understand that under the present arrangements in this behalf the house-owners do not have sufficient incentive to carry out these repairs; nor are the repairs carried out in default of house owners by the Municipality.

In the opinion of the Group this state of affairs must be improved in both directions, that is to say :—

(a) By making available facilities by way of financial accommodation, etc., to the owners of buildings and if necessary, by the grant of appropriate concessions and reliefs in respect of rent to cover the cost incurred for repair and restoration of buildings somewhat on the lines suggested by the Housing and Housing Finance Panel in this behalf;

(b) The powers of the Municipal authorities must be strengthened, if necessary, to provide for their carrying out such repairs and restorations of buildings in default by the landlord and for recovering the cost thereof.

Thereafter there must be vigorous enforcement of the requirements for restoration and repairs in such cases.

## 30. Minimum standard of housing.

We have given very careful consideration to the question of the standard of accommodation to be provided in the public housing programme.

We note that the Housing and Housing Finance Panel has recommended that the minimum accommodation for a family should consist of at least two living rooms and a separate kitchen with sanitary and other arrangements. We entirely subscribe to the sentiment underlying this recommendation as well as to the fear entertained by the Panel that if these standards were compromised on grounds of practicability there is every risk of our perpetuating substandard housing conditions for a long time to come.

Nevertheless we are of the view that it may be found necessary for executing at any rate some components of the programme of public housing that we have recommended for adoption, "to lower down our sights" temporarily so far as the standard of accommodation is concerned. Apart from the housing programme for employees of public authorities, we have envisaged a large programme of industrial housing, to cater to the largest single component of Bombay's population namely "industrial labour" including also therein the vast bulk of those who constitute the residents of the worst housing conditions in the Bombay area. For various reasons in spite of the several measures of encouragement it has not been possible to elicit from Industry hithertofore any significant volume of house-building activity for housing their employees. The reasons for this are analysed and certain suggestions made for remedy in paragraph 55 in the next Chapter of the Report.

Considering all this we apprehend that it may be necessary as a transitional measure to rest content with tenements below the standard enunciated by us. In doing so, particularly if single room tenements have to be put up with as a transitional measure, we would insist that the construction of the blocks of these tenements should be so undertaken as to permit easily of the tenements being joined up to provide the minimum standard accommodation of a two room tenement which is now recognised as the national minimum standard of housing to be aimed at.

We might state here that our colleagues Shri M. A. Master and Shri J. E. Castellino, however, hold the view that notwithstanding the above mentioned considerations single room tenements should not be constructed even as a transitional measure. They consider it our duty to take the broader view of the situation and would urge upon the Government, both at the Centre and the State, that the necessary finance *must* be found for building tenements of the minimum standard for which there is a very strong opinion in the country.

### **31. A Measure of Equivalence in Public Housing Standards.**

When such large departmental housing programmes are undertaken by Central and State Departments or other public authorities, it is necessary to ensure a measure of equivalence in the standards of accommodation provided respectively to the employees of different classes. Wide disparities in such provisions are apt to cause avoidable heart-burning amongst employees and embarrassment to employers, apart from the likelihood of abuses like extensive sub-letting etc.

### **32. Rent Control Restrictions.**

The Housing and Housing Finance Panel have examined closely the question of handicaps and disincentives to private investors in the house building trade. They have also made certain recommendations bearing upon modification of the rent control provisions; they have also recommended certain reliefs and concessions and have further urged the creating of conditions which may bring a fair net return after payment of all outgoings and taxes to encourage a larger volume of private house-building activity. We broadly endorse the need for relief and recommend these suggestions for early and serious consideration to the concerned authorities.

### **33. More Finances for Co-operative Housing.**

We understand, as at present, one of the limiting factors to the volume of co-operative housing activity is the limitation on the funds available for the purpose by Government to the Bombay Co-operative Housing Finance Society. Having in view the need for expanding co-operative housing activity to the maximum possible extent we recommend that larger provisions of funds should be made for this purpose. We also recommend for consideration of Government the suggestion of the Housing and Housing Finance Panel that arrangements should be made for monies being advanced to the Bombay Co-operative Housing Finance Society from the funds of the Life Insurance Corporation.

### **34. Long term Finance for Housing Activity.**

In Western countries a very large contribution towards provision of housing accommodation is made by house-building societies. For instance, in England during the two World Wars a large proportion of the housing was provided by such house-building societies. Apart from their own subscribed capital contributed by the promoters, the house building societies obtained long term loans from the capital market or other financing agencies.

In our country as at present there are no organised agencies for the supply of long term finance for housing activity to the private house-builder, whether he is building for himself or as an investment in housing. As several channels of financial resource have been harnessed to meet the needs of planned development there has been a drying up of the customary sources. So far as housing by public authorities and housing by employers or on their behalf by some other agency for industrial labour are concerned, the problem of finance is of a different character and is distinguishable from the general problem of long term finance for the private house-builder, which we are considering here. So far as co-operative housing societies are concerned there is in Bombay an established agency for making finance available to them, namely the

Bombay Co-operative Housing Finance Society and we have recommended above that larger finances should be extended by that agency to co-operative house-building societies. Apart from all these sectors of house-building, there would still remain the need for making available long term finance to the private house-builder, especially the person wanting to build a house for himself. As at present such house-building has to be undertaken principally from the person's own savings. There are undoubtedly large numbers of persons of the middle classes, with secure dependable incomes, out of which they would be able over a number of years to pay towards instalment-purchase of a house, who would like to build houses of their own and pay for them over a number of years rather than go on paying high rents for hired accommodation as tenants. Recently Government have undertaken schemes under which up to certain low income limits, limited long term loans for housing finance are made available, even to individual builders. But the scheme does not seem for various reasons (principally procedural difficulties) to have been sufficiently availed of. Besides, it still leaves would be house builders above the specified income limit unprovided for. It is well worth considering, in our opinion, whether some sources of organised long term finance could not be made available to promote this category of house building. A house is a long term tangible asset and *prima-facie* a mortgage of a house would seem to be a safe instrument of credit for a long term financing agency. Commercial banks under our banking practices are, generally speaking, not permitted to commit their funds for the long-term investment involved in house building. Nor is it practicable for such persons to resort to the capital market for loans. There is an obvious need for long term finance being made available for house-building activity ; however, in our set-up of financial institutions and agencies there is no arrangement at present for financial accommodation being made available for such purposes. The solution of the problem is of course for financial experts to devise. We recommend that the possibility of making substantial amounts of long term finance available through appropriate institutions to private house-builders, particularly those building houses for themselves in localities where housing is short, may be explored by the appropriate authorities. We note with pleasure in this connection the announcement of a recent decision by the Life Insurance Corporation that a certain sum of money out of its funds, which are particularly suited for such long term financing, would be made available by it through the State Government towards financing of public and private housing.

### 35. Some Issues Relating to Slum Clearance.

For clearing slums in the island which cover an area of 877 acres it is estimated that an *additional* area of 946 acres would be required. Having regard to the extreme shortage of space for further building



activities in the Island, it is inevitable that a substantial portion of the slum dwellers will have to be housed outside the Island. Considering the complexities and difficulties of slum removal, schemes must be drawn up specifically to overcome the disinclination of slum dwellers to be re-housed away from the original locations. Apart from reserving areas out of the suburban tracts coming under development immediately north and east of the Island and reclamation tracts for south re-housing schemes for slum dwellers, the grant of tapering subsidies, that is to say, progressively diminishing concessions until they disappear over a period of say 4-5 years, to cover the cost of transport on re-location may also have to be considered.

We do not consider it necessary to deal with the specific problem of slum clearance in as much as there is already an accepted scheme for the purpose with provision for grant-in-aid and loan by the Central Government. The Bombay Municipality has already drawn up a programme for slum clearance and we would merely urge that it should be executed with speed and vigour. We notice herein only certain special aspects ancillary to the problem of slum clearance in Bombay.

Certain practical matters in connection with the implementation of a programme of slum clearance deserve to be noticed. Most of the unbuilt slums in Bombay, that is to say, slums comprising shacks, cottages and tin-sheds, are made up of unauthorised constructions. In many cases they represent also encroachments on municipal land or land of other public authority or sometimes even of private individuals. The removal of these encroachments and unauthorised constructions is, however, not easy in practice. Quite frequently if such structures are removed they spring up elsewhere. It is going to be several years before our programmes of public housing or of slum clearance will have sufficiently progressed to justify our envisaging that to all such dwellers in unauthorised slum shacks we will have alternative *pucca* accommodation to offer. In these circumstances it becomes necessary to consider whether in addition to the other measures for provision of public housing and for slum clearance by building *pucca* tenements, some interim measures to obviate the further growth of such unbuilt slums and to permit of more rapid clearance of such existing slums are not called for.

For such interim measure we must think in terms of providing plinths in a properly laid out ground with the amenities of conservancy, drainage and water supply at modest rentals to enable slum dwellers to put up their own structures. Provided the general sanitation of the plot is maintained there would seem to be no objection to permitting persons to put up, on laid out plinths, their own structures (subject to minimal conditions regarding height, dimensions, etc.) of whatever material they may be able to afford. Possibly, certain additional restrictions with reference to fire hazard

and rain proofing etc., may also have to be prescribed. We have already noted that the cost of a *pucca* tenement of minimum standards is going to be not less than Rs. 6,000 each. The economic rent of such a tenement even when we have such a tenement to offer would be far in excess of what a large majority of the slum dwellers would be willing or in a position to pay. To the extent to which slum dwellers comprise industrial labour provided with labour housing by their employers they would have subsidised housing accommodation to look forward to. There would nevertheless be others for whom there is at present no specific housing programme. It is for the catering to these persons that we would recommend the making available of plinths in laid out plots with the necessary sanitary services, supplied by the Municipality.

We understand that the Bombay Municipal Corporation has made one or two such experiments already. If the experiments have not been as successful as we might have expected them to be for extraneous reasons like the distance of particular plinth-plots or the lack of sufficient amenities therein, etc., the arrangements could be improved in these details in the future. The main idea would still be worth pursuing under proper conditions.

We would here recall that as a measure of immediate relief to slum dwellers before alternative *pucca* housing is provided, it has been recommended by the Selected Buildings Projects Team on Slum Clearance that water supply and drainage services should be provided, as far as possible, to existing slums to ameliorate their conditions of living pending eventual resettlement in *pucca* housing or better laid out locations.

Having in view all these circumstances, and especially the limitation of finance for putting up "pucca" slum clearance housing we would recommend that plots should be laid out by the Municipality serviced with water supply, drainage, passages, etc., plinths prepared thereon and such plinths let out on modest rentals for the erection of their own structures by tenants.

Since this housing would only be single-storeyed, it would not be practicable where land is expensive; at the same time the slum dwellers will find it hard and would be unwilling to move far away from their places of employment. Such plots must, therefore, be located as far as possible in the proximate Suburban areas. They should also be sited as far as possible near existing lines of communication to facilitate the problem of transport.

We understand that a considerable number of housing projects both of public authorities and others are held up because of the difficulty of removing occupants of unauthorised shacks at present built on the plot. The provision of such a facility as described above would incidentally help the release of such land.

In the existing slums as well, wherever that may be practicable, similar arrangements of the building of plinths on a proper lay-out, supply of water, conservancy and drainage facilities may be made and the slum-dwellers asked to reconstruct their hutments in an orderly manner on the plinths provided.

### **36. Public Land-owning Authorities to comply with zoning and other regulations.**

We understand that as at present land-owning public authorities, including the State and Central Governments, are not required statutorily to comply with the Municipality's zoning regulations in respect of buildings owned by them and used for public purposes.

We recommend that all land-owning public authorities (whether they are legally liable to do so or not) like other land-owners should comply with the requirements in respect of land use, (and especially for location of industrial units), which may be laid down by the Corporation.

### **37. Relocation of Government establishments.**

As a lead to relocation of private industries it would be well worth while of the State and the Central Governments and other public authorities closely to examine the possibilities of removing from the island of Bombay offices and establishments under their control—

- (a) preferably, to some mofussil centre,
- (b) failing that, at any rate, to the suburbs of Greater Bombay.

The Land and Open Spaces and other Community Requirements Panel have examined illustratively the cases of certain institutions and establishments in this connection. We invite the attention of the concerned authorities to those suggestions and recommend that a more comprehensive review of the existing position should be instituted by both the Central and State Governments for examining this issue with reference to the various institutions and establishments in respect of which it would seem to arise.

### **38. Traffic Improvements.**

In order to provide additional north-south arteries in the Bombay Island the construction of a main highway connecting Frere Road *via* Reay Road and Sewree to Wadala should be pursued vigorously. We also strongly recommend that the Tulsi Pipe Line Road already under construction by the Corporation be completed expeditiously.

Apart from these specific measures, there are a large number of improvements of detail which would bring easement to the traffic situation.

The Communications and Traffic Panel has made several detailed suggestions for removal of bottle-necks, for providing better circulation of traffic, for pedestrian crossings, for opening additional main roads, for cross-connections east to west, for over-bridges, for subways, etc.

A short tunnel under the Malabar Hill to join up to a road to be put down on the promenade along the seaface over the stretch upto Hornby Vellard [as suggested by the Communications (Traffic and Railways) Panel in 1947] would likewise help relieve the present congestion on Peddar Road and provide a valuable improvement to the traffic artery along the west of the Island.

Proposals for joining up Princess Street to the Marine Drive are already under way with the Municipality, we gather.

Apart from such detailed recommendations in respect of the roads in the Island of Bombay, the Communications and Traffic Panel has also made recommendations for improving the traffic circulation system and the road surfaces in the suburban areas.

A crossing over the Versova creek to connect Versova with Madh island may also be considered. It will open up a new area for residence and will save the unnecessary diversion of 12 to 13 miles to reach it *via* Malad. All these deserve the immediate attention of the concerned authorities

### **39. Staggering of office hours.**

As a measure of transitional relief the Study Group would recommend that Government may consider a slight staggering in the starting and closing hours of Government offices, banks, shops and commercial concerns to ease the traffic position on the suburban trains and buses in the morning and evening. It must be stated here that any such measure for staggering must be carefully considered, bearing in mind the effect of such staggering on the social and domestic life of the community. A specific scheme involving only a slight staggering in the hours of commencement and cessation of work is recommended in this behalf by the Communications and Traffic Panel, which the Government of Bombay might consider in consultation with the interests involved.

#### 40. Parking.

There is acute shortage of parking spaces on several busy traffic sections and important business localities. The provision of parking lots requires additional space and we come up once again to the basic difficulty that there are not sufficient open spaces available to (or easily procurable by) the public authorities (and indeed even physically available at all) to enable them to allocate space for this, among other requirements for open spaces, within the Island of Bombay. The provision of parking lots can be improved, therefore, by the same general line of action which the Study Group has elsewhere recommended for obtaining sufficient open space in the island of Bombay for the various public requirements therein.

Apart from this basic solution of the problem, the Communications and Traffic Panel has made certain suggestions of detail about permitting parking of vehicles on certain roads during certain periods, which may be considered by the appropriate authorities.

We are happy to learn that the Municipality has already started the practice of insisting on the provision of garages and parking places while giving permission to build office and business premises as well as residential buildings having regard to the number of motor vehicles likely to create a parking problem as a consequence of the particular construction.

#### 41. Co-ordination in the activities of different utilities.

Inadequate as undoubtedly is the present road system of the Island to cope with the traffic load that it has to bear, a measure of avoidable inconvenience and irritation is caused by certain extraneous and remediable factors. Thus, there seems to be lack of co-ordination between the different utilities, including those controlled by the Corporation; to quote an instance, roads which have recently been made by one authority are excavated soon after by another and in any case restoration and resurfacing is seldom adequate after the road is covered up. This is a problem either purely of municipal administration or of securing the necessary minimum coordination with other authorities by the Municipality, and the Study Group would content itself with inviting the attention of the Municipal authorities to it.

It is understood that the Municipal authorities are proposing to move Government to amend the Bombay Municipal Corporation Act to invest certain additional powers in the Municipal authorities with reference to the resurfacing and reconstruction of roads by Public Utility concerns. Powers are sought in this regard on the lines of the Public Utility Street Works Act, 1950 of England.

#### **42. Roads and utility repairs where possible during slack hours.**

The Study Group would also like to suggest to the Municipal Authorities that they may consider whether restorations and repairs of busy traffic sections could not be carried out during periods other than those of peak traffic; it might even be possible (and indeed might prove to be more efficient) to carry out such works of roads construction or resurfacing during the night.

#### **43. Goods Trucks.**

The Study Group considers that it is also necessary to take notice of the traffic generated by goods trucks in the Bombay island. It may be considered whether goods trucks should not be excluded from certain roads, at any rate during certain times of the day. In order to help segregate goods traffic and tackle the problem about unauthorised parking of goods trucks on roads, it is recommended that a measure of control and regulation should be exercised over transport companies and regular locations appointed and furnished as terminal points for goods traffic as in the case of passenger transport of the Bombay State Road Transport Corporation.

Our recommendation about another highway to the east along the harbour area to connect Frere road via Wadala to Sion has an important significance for the traffic of goods lorries. This route which would serve the dock area as well is likely to be eminently suitable for diversion of goods traffic, which would greatly relieve the traffic conditions on the alternative routes.

#### **44. Specific immediate measures for improving open spaces and recreational facilities in the Island.**

As an immediate measure for provision of open spaces and recreational facilities within easy reach of the island population we recommend the exploration of the following suggestions made by the Land and Open Spaces and Other Community Requirements Panel :—

\*(a) the possibility of setting up almost forthwith a park extending over 65 acres near the Race Course at Mahalaxmi;

\*(b) the possibility of using the Race Course grounds within the Race Course track for use as a playground by school children in an organised manner from the nearby schools;

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\*The details of how these could be done quite easily may be seen at paragraphs 25, 28 and 31 in the Land and Open Spaces and Other Community Requirements Panel's Report.

\*(c) the possibility of developing Elephanta Island as a recreational centre for the population of Bombay Island and of organising easy and cheap ferry services across to it from several points on the main Island ;

†(d) the feasibility of taking over under close Municipal surveillance if not direct Municipal Management plots reserved as playgrounds in different layouts of building area sanctioned by the Municipality from time to time.

We further recommend that under no circumstances should any further structures be allowed on the public playgrounds and open places in charge of the Government or the Corporation other than structures like pavilions for the convenience of sportsmen, etc. We further recommend that the Government should take the earliest possible steps for the removal of the existing structures on the Azad Maidan and such grounds, which were put up during war purely as a temporary measure. We also recommend that the present practice of permitting exhibitions to be held on the existing playgrounds and open spaces to the deprivation of their use as playing fields over considerable parts of the season should cease forthwith.

The Study Group is of the view that the possibility of removing the Race Course altogether from its present location to a suitable site in the Suburbs should be actively explored. The Group further wishes it recorded that when this land becomes available for an alternative use, it should be kept open as a park, play-field or recreational space and not used as a building site having regard to the extreme congestion of population in the adjoining localities. It may be recalled in this connection that in the Master Plan for Bombay wherein such a relocation of the Race Course was contemplated it was envisaged that the land thus released may in part be used as building sites. Shri Modak, one of the joint authors of the Master Plan, and now a Member of our Group, wishes it recorded that in view of the developments that have taken place in the City since 1947, he is now of the opinion that if the Race Course is removed to another location the grounds released should be used exclusively as an open space and playground and for recreational purposes.

#### 45. Reclamation of Salt Pan Areas.

In paragraph 21 above (Chapter IV) we have referred to the possibility of reclaiming the creek land between Wadala and Chembur. One of the important points to be considered in this connection is the removal of salt pans from this area, which cover an area of about

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\*Paragraph 25(5) of Land and Open Spaces and Other Community Requirements Panel Report.

†Paragraph 31(19)(d) of Land and Open Spaces and Other Community Requirements Panel Report.

2,365 acres. The entire creek area including marshy lands adjoining these salt pan areas will be about 2,700 acres. From the discussion the Chairman had with the Deputy Salt Commissioner, Bombay, it would appear that the salt pans in this area manufacture about 8-10 lakhs maunds of salt which is only about 10 per cent. of the Bombay Suburban production and less than  $\frac{1}{2}$  per cent. of the country's production of salt. The removal of these salt pans will not make significant or irreplaceable difference to the country's salt production. A good deal of this land is of the Bombay Government's ownership under lease to the salt manufacturers. Some of the salt pans are run by the Salt Department of the Central Government departmentally. Some of the land also vests in the Central Government. Many of the leases provide for resumption of the land with six months' notice if required by Government 'in its judgment for public purposes. It would appear that the resumption of this land for the purposes of urban development would be readily feasible once the issue is settled with the Salt Department of the Central Government.

Salt pan lessees are licensed by the Salt Department for periods corresponding to those for which land has been leased to them by Government. Salt is prepared from the high tide water entering into the pan through the creek twice a month. It is understood that sewage water contaminates the salt pans as the drainage water runs into the creek and the creek water at high tide is utilised for manufacture of brine. It would appear that even apart from the undesirability of using scarce land in the proximity of the congested urban conurbation of Bombay for salt manufacture, on the grounds of the health hazard itself, the removal of the salt pans would be justifiable. Large portions of these lands may not seem to require much of filling. The area could be reclaimed without much filling if only the creek water was prevented from entering into this area. In fact over some of this area the sea-water has to be pumped for salt pans. The problem of disposal of storm-water in the monsoon will have, however, to be studied and tackled. Altogether the physical problems involved in the securing of this substantial tract of very well situated land for town development seem to be easily tractable. The quantity of spoil, if any, needed for filling this area could also probably be secured from convenient borrow areas close-by.

#### **46. Milch Cattle Stables.**

Practically the entire cattle have been now removed out of the Bombay island. There are however in the suburbs some 55,000 buffaloes (apart from 15,000 in the Aarey Colony) and they would, it seems remain there for a considerable time to come.



We invite attention to the fuller consideration of this matter in the report of the Land and Open Spaces and other Community Requirements Panel. The problem of private sites for milch cattle in the suburban areas of Greater Bombay is basically quite easy of solution. There is plenty of suitable land available for the purpose and the problem is one principally of Municipal regulation i.e. reservation of areas and controlling and regulating the construction of milch cattle stables and sanitary supervision over their cleanliness, and over the disposal of dung. More specifically we would suggest that early steps should be taken to remove the milch cattle stables that have grown up along the Ghodbunder Road, particularly from Jogeshwari to Goregaon, to suitable land in the suburbs that may be reserved by the Bombay Municipality for housing milch cattle as referred to above.

The possibility of making available experimentally a couple of hundred acres out of the large Aarey Colony estate for the location of private milch cattle stables under appropriate sanitary regulation and rules for construction is worth considering. Apart from providing for the location of private milch cattle stables and helping control the present evil of insanitary and ugly cattle stables springing up all over the suburban areas, such an innovation may help diversify the pattern of the Aarey experiment and subserve in an important way the broad purposes of the Aarey colony itself. The construction of unauthorised stables and the keeping of milch cattle in conditions of gross insanitation and the hazard to public health therefrom is a chronic and persistent evil with which those who know their suburbs would be familiar. We note that Government have now taken wide powers for regulating the construction of stables etc. under Government Order, Agriculture and Forests Department, No. DDC/CCO-1-A, dated 17th November 1958 by imposing a licensing system in respect of cattle stabled in the Municipal limits. We expect the Dairy Development Department and the Municipal authorities between them should now be able to bring this mischief under control.

We must, however, record our opinion that it is necessary to regard these measures as being by way of an interim improvement over the existing grossly unsatisfactory conditions. The long term solution of the problem must be sought in a more radical way. Milk supply to large towns like Bombay must be found, as it is done in the cities of advanced countries, by importation of milk from the dairy districts in the rural areas and *not* by locating the milch cattle themselves within the city limits. Apart even from the problems of sanitation and health hazards created by the stabling of milch cattle in the midst of thickly populated urban areas, the production of milk in the adjacent rural districts is bound to be cheaper, even allowing for the cost of transportation, than the production of milk from stall-fed cattle in milch cattle stables located within a city.

Besides, the production of milk furnishes a ready side occupation to the agriculturists particularly in our country where small farms predominate and it is necessary to find ancillary sources of income for the farmer. The elimination of milch cattle from the city area would besides result in relieving the overloaded railway system serving the city, which has today to handle a large amount of traffic in fodder and cattle-feeds. There are several other incidental benefits. For instance, the disposal of dung constitutes a serious problem within city limits; whereas, it would be no problem if the cattle are located in the agricultural areas and indeed would be a source of very valuable manure to the land. Indeed, the development of milk supply resources in suitable areas in the surrounding countryside so as to bring about the practical elimination of milch cattle within city limits is an obvious and recognised desideratum in the organisation of supply of milk to cities generally. In Bombay, the successful development of milk supply from the Anand area is a pointer to what can be achieved in other suitable areas as well.

We are of course conscious that the elimination of the present large population of milch cattle in the city of Bombay or even the bulk of it cannot be achieved overnight. A steady policy to develop promising dairy districts in the rural areas will have to be pursued and the replacement of the milk supply can only be achieved over a number of years. We would, however, recommend that a definite policy to this end should be chalked out and suitable programme drawn up and pursued in that direction. It is further recognised that elimination of the entire cattle population in the Bombay area (outside of Aarey colony) would not be practicable; nor even perhaps altogether desirable. It is probably a wise insurance for a big city like Bombay against possible interruptions due to storms or bad weather in the rail communications to have a modicum of milk supply under command within its own limits. If the present cattle population in the Aarey Colony is not considered sufficient to ensure this sufficiently a further few thousands of cattle may be allowed to be kept in suitable stabling conditions as a permanent measure in the city. It is clear, however, that as a long term measure one must envisage, if not the elimination, at any rate a very substantial reduction in the present large population of cattle outside the Government Milk Colony at Aarey.

Measures for improving the sanitation of stables which are being taken in the meantime must therefore be conceived in terms of an interim arrangement against this long term perspective.

#### **47. Early removal of Bandra Slaughter House.**

The Bombay Municipal Corporation has been contemplating shifting of the Bandra Slaughter House to a new location at Devnar near Chembur, where it proposes to build a slaughter house on modern

and up-to-date lines. The location of the slaughter house at Devnar will possibly give an impetus to the starting of new industries based on the bye-products of the slaughter house such as hairs, hoofs, horns, bones, intestines, fats, livers, glands, etc. Incidentally also the relocation of the slaughter house will release a sizeable area of land in an important locality which the Municipality may be able to use to make a beginning with the establishment of an alternative business and marketing centre in the Bandra-Sion area to which the present slaughter house adjoins.

Provision may also be made at the new site for establishing obnoxious industries such as fish-meal fertilizers, etc. The shifting of the slaughter house to a more spacious location towards the eastern borders of the Island would, besides providing for opportunities for starting a number of industries based on the raw materials available in the slaughter house, encourage the shifting of the tanneries from the midst of the town, thus implementing the municipal zoning policy as well as releasing considerable area for housing and other purposes.

#### 48. Cheaper Housing ?

It is sometimes suggested that our standards regarding housing are unnecessarily high and related to a much longer life for a house than we need contemplate in the present circumstances, that is to say it is suggested that if we build houses to last say for 15 or 20 years instead of 60 or 80 years as at present, we would be able to build them much cheaper.

This notion stems from a misconception. As we have noticed elsewhere, there is no doubt some scope for providing for "kutcha" housing in single-storeyed houses, where cost of land is not a serious deterrent; and such constructions would no doubt be considerably cheaper. Barring such kutcha housing, however, if one is to go in for storeyed constructions, that is to say pucca houses, there is no option available in practice for building houses to last say only 15 or 20 years at cheaper prices than what houses designed to last 60 or 80 years would cost. There may be scope for economy in the finish of a tenement or scope for cheapening some of the items like floors and partition walls, etc., but the main structure of the building, if it is to be sound and safe, has necessarily to be of certain specifications. If the building is sound enough to stand at all and is made up of the conventional building materials (for which there is really no practicable alternative as noticed below) then the framework of the buildings and its load-bearing members have to be strong enough to stand for 60 or 80 years and it is not possible to economise in cost by reducing the specifications of a multistoreyed building so that it may be safe and yet last only for 15 to 20 years.

#### **49. Need to rely in the main on conventional building materials.**

So far as the problems regarding building materials are concerned, we invite attention to the recommendations of the Building Materials Panel with which the Study Group is in general agreement. Having regard to the fact that both in the island of Bombay and the suburban areas, due to high price of land and limited availability of space, single storeyed buildings are largely out of the question, it is necessary to think for our housing in terms of the conventional building materials only viz., bricks and stone, cement, timber and steel. So far as sand is concerned if it is found difficult to increase supplies to cope with the much larger building programme that we envisage, stone dust can be used.

While for two or three storeyed buildings timber can replace steel, since timber is almost as difficult to get as steel at present and in any case is equally or more expensive, there are no hopes of replacing steel requirements by timber to any considerable extent.

#### **50. Supply position of building materials for a massive housing programme.**

Cement is now available in adequate quantities; the supply of sand and bricks and stone can also be easily expanded to meet the increased requirements of an annual construction programme of about 25,000 tenements. Steel is a difficulty at present; however, with the steady coming into commission of the steel projects of the country under construction, it is hoped that these difficulties would have been largely overcome. It would appear that the position of steel would start easing considerably with effect from towards the end of 1959 and beginning of 1960. Considering the time that must necessarily elapse in the taking of decisions on these recommendations and in the concerting and organising of the different measures necessary to step up the annual construction programme in the city from its present size of roughly 5,000 tenements to a figure of 20,000 to 25,000 tenements, the Study Group feels hopeful that the quantity of steel forthcoming would not eventually be a limiting factor. It is estimated that for a programme of 25,000 tenements a quantity of 30,000 tons of steel would be needed annually for the city.

There is no insuperable difficulty about the supply of other building materials. The supplies will readily respond to increases in the demand as a result of a larger housing programme.

#### **51. Certain difficulties in the building materials trade.**

The Building Materials Panel has made certain suggestions of detail relating to the difficulties at present experienced by brick manufacturers, in the transportation of sand, in the working of stone

quarries, etc. We invite the attention of the appropriate authorities to these difficulties. In particular, we would like to recommend that the Government designate a specific authority to maintain continuous liaison with and to attend to the difficulties of the Trade relating to building materials. This work used to be done in the past by the Brick Controller in respect of supplies of bricks, etc. There is need for measures of co-ordination between different authorities and for ascertaining and removing the difficulties of the Trade in respect of the supply and transport not only of bricks but also of sand and stone. We would suggest that a specific officer, either in the Public Works Department of the State Government or in the Housing Commissioner's Organisation, could be designated as the authority for attending to the difficulties and grievances of the suppliers of these materials and for initiating measures with the appropriate authorities.

The question of transport of buildings materials particularly sand and bricks also needs mention in this connection. Attention of the Study Group was drawn to the large increases effected in the transport rates for brick and sand by the railways recently. The transport rates in the case of sand, for instance, have been raised by the railways from Rs. 20 prior to the war to Rs. 105 per wagon (600 cft.) from the usual fields of supply to the city viz., Mumbra, Kalyan, Virar, Bhayandar and intermediate stations. It is understood that the rates have been raised by the railways almost prohibitively with a view to discouraging the transport over short distances in which the railways are generally not interested and which unduly interfered with their operations in this area. The Railway administration was also probably influenced by the view that such materials could be carried by goods trucks also. While the merit of this general policy followed by the railways of discouraging short haul traffic can be appreciated, in this case, the discouraging of the traffic by the Railways has resulted in a disproportionate increase in the cost of these materials to the very important building industry of the city already working under many special discouragements and handicaps such as shortage of space, high cost of land etc., Besides, the traffic congestion in the city would be still further accentuated if all such materials have to move by trucks. The Group would, therefore, suggest that the matter be taken up with the appropriate Railway authorities for considering whether an exception could not be made to their general policy and the rates for haulage reduced so far as these particular runs are concerned, in the special circumstances of Bombay City.

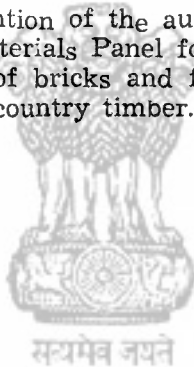
## **52. Long term planning of demand by public authorities.**

It would appear that if the placement of orders for bricks/sand/stone products by the different public authorities is pooled, co-ordinated and steadied over a reasonable length of time (say about

three years or so at a time) in respect of at any rate a basic minimal annual demand and a rate contract fixed with reference to such demand, it would have a significant beneficial effect on the conditions of supply in the Trade, and on prices of these materials. Such a policy would elicit larger supplies of these materials, steady the prices in the Trade and result eventually in procuring these materials to the public authorities cheaper than at present. With a steady volume of demand the suppliers would be enabled to take steps for expanding production; fluctuations would be ironed out and conditions in the Trade would become propitious for a better level of organisation and technique. We recommend that the State Government may initiate steps for bringing about such co-ordination and long term planning of demand.

### **53. Improving Techniques.**

We also invite the attention of the authorities to the suggestions made by the Building Materials Panel for improving the technique of production in respect of bricks and for expanding facilities for undertaking seasoning of country timber.



## CHAPTER VI

### AGENCIES AND INSTRUMENTALITIES.

#### 54 .Co-ordinating agency for carrying out the programme of improvements.

For the carrying out of the planned programme of improvements that we recommend in different sectors of activity e.g. housing, industrial location, improvements to traffic, suburban development, adding to the stock of open spaces for recreational and other community requirements, extensive reclamations, development of large building sites, etc., it will be imperative to set up a co-ordinating agency under the highest authority to guide in the working out of the different aspects of the programme by the respective authorities and to maintain a continuous over-sight over the progress of the programme in all its inter-related aspects.

We regard this as our most important recommendation and as a *sine qua non* of success for the measures we have suggested. The necessity for such co-ordination of activities has repeatedly come home to us in the course of all our discussions both in the Study Group and its various Panels.

The above-mentioned sectors of activity overlap at many points and fall within the spheres of several different Authorities ; namely, the Departments of the State Governments, the Bombay Municipal Corporation, the B.E.S.T., the Port Trust, the two Railways, the Housing Board, etc. Then the attached offices and agencies of the Government of India, as well as the Defence Services are also important constituents in the picture, if nothing else, at least as large employers and holders or users of land. Several of the above-mentioned public authorities, besides, own large tracts of land in the Bombay area ; under the law, in the case of lands held by the Central and the State Governments and certain other Authorities and used for their own purposes municipal zoning regulations are not automatically applicable, for which reason we have elsewhere suggested that all such land-owning authorities should never-the-less fall in line with other land-owners and comply with such zoning regulations duly enacted by the Municipal Corporation. Our suggestions and recommendations have necessarily been couched in general terms. Detailed programmes of activity will have to be

worked out to fill in the plan-frame of these recommendations. While the activities will lie in the ambit of specific statutory authorities, there will obviously be need for consultation and adjustment between them at numerous points. It is essential, in our opinion, to establish an institutional arrangement for a continuous stream of such co-ordination and consultation.

All these Authorities in the course of the discharge of their duties closely act and react on each other's fields of activity and interests and all together have a very important influence on the growth and development of the town. Large numbers of cases have come to our notice in which we have observed flagrant lack of co-ordination in the activities of these different Authorities to the detriment of the general public interest. Indeed the present state of affairs in Bombay city is largely accountable to such absence of co-ordination and we have no doubt that at least some of the haphazard development and congestion of the city would have been obviated if such a co-ordinating agency had been set up 10 years ago — and even if nothing else had been done — following the recommendations of the Master Plan for the Bombay area prepared and published by the Bombay Municipal Corporation in 1948. If a machinery for co-ordination is necessary even for the normal activities of these bodies, there can be no manner of doubt about its necessity in the context of the ambitious and far-reaching plans of town development that we have recommended.

We envisage that the Council of Co-ordination would be a high-powered advisory body comprising the representatives of all the above Authorities. Apart from resolving differences between different Authorities and co-ordinating their activities such a Council would be able to keep under review the progress of the various activities initiated by the different agencies.

It is evident that the Council of Co-ordination, if it is to be effective, will have to be set up at any rate to start with under the highest available auspices. We recommend that the Chief Minister may be the presiding authority of the Council and hope that it would be possible for him to do so at least for the first few years after it is set-up. Subsequently after a firm tradition of mutual co-ordination between the different agencies has been established it may be possible to dispense with his good offices in this position and make other dispositions. The Mayor of Bombay and the Minister of the State Government principally concerned would appear to be appropriate incumbents for two of the Vice-Chairmanships of the Council. It might be useful to have industrial and commercial interests in the City also appropriately represented. We presume that the Council will want to function in its more detailed activities through a sub-committee at the official level,



which we suggest might include, among others, the Municipal Commissioner and the concerned Secretary of the Bombay Government as well as the representative of the Railways, Defence Services, Port Trust, the Reclamation Authority, etc.

The Council might normally meet less frequently, perhaps once a quarter as a rule, the sub-committee meeting much more frequently. The Council of Co-ordination would need a small Secretariat to service its deliberations and the activities of the sub-committee of the Council. Since the Council would be a co-ordinating authority it would have no executive functions as such to carry out, the execution being done by the appropriate Authorities. The Secretariat of the Council, therefore, would be very small and could perhaps function to start with as a "cell" in one of the Departments of the State Secretariat most concerned. Later on it may be possible to make other arrangements in this behalf, with an independent Secretary. We refrain from attempting to particularise the composition of the Council or the method of its working more than to the minimum extent necessary for subserving the purposes we have in view.

#### **55. Housing for Industrial Labour : Agency for**

We have already noticed how large a component of Bombay's population is accounted for by "industrial labour". Besides, "industrial labour" probably figures even more than in proportion to its size in the category of those without any or adequate housing accommodation. The problem of providing housing for industrial labour is, therefore, a very important component of the public housing programme needed in Bombay. It is, therefore, necessary to consider further the exact set-up and agency for executing the plan of housing for industrial labour included in the programme of public housing of 20,000 tenements a year suggested illustratively by the Housing and Housing Finance Panel and in broad outline endorsed by the Study Group (paragraphs 22 above).

It will be noticed therein that it is contemplated that the Bombay Housing Board should put up 6,000 tenements annually for industrial workers and low income group persons. The programme also includes the provision of a further 8,000 tenements for housing employees of industrial and commercial establishments in addition to those provided for by the Bombay Housing Board. This latter component is set down in the Housing and Housing Finance Panel Report against the "Central and the State Governments".

Certain important aspects relating to the programme of housing for industrial labour might be recalled.

By and large, the response of employers to the projects launched by the Government of India for encouraging provision of such housing by them for their industrial labour has been very poor. Analysing the reasons underlying this we find that they would fall under two broad categories :—

(a) Difficulties of employers in finding capital finance for the initial outlay for undertaking extensive housing of their employees ; the burden on Industry of the recurrent subsidized element in the provision of such housing ; some uncompensated financial incidence in respect of income-tax, municipal taxes, etc.

(b) The reluctance of employers to undertake such housing *at all* for certain other reasons even apart from the above-mentioned difficulties.

Firstly, so far as (b) is concerned : For one thing employers who have enough worries of their own in connection with production in their industrial units are unwilling to assume further worries incidental to their also setting up as landlords for the housing accommodation of their employees.

More particularly the difficulties of "estate management" relate to collection of house-rents, tenancy laws and the difficulty of evicting a recalcitrant employee-tenant even after termination of employment ; difficulties in controlling, sub-letting and other abuses of the facility ; the incidence of such land-lord-tenant relationship on their industrial relations as employer-employee, etc. Apart from these misgivings relating to the current duties of estate management there is a further initial difficulty which has to be faced by anybody embarking on large scale constructional activities, e.g. procuring suitable building site ; obtaining utility services thereto ; procuring scarce building materials, etc., etc.

The reluctance of employers to assume estate management responsibilities in the light of the above-quoted difficulties is comprehensible. The Study Group, however, feels that it ought to be possible to concert suitable measures for removing the bulk of these difficulties.

If employers are to provide subsidized housing for their employees obviously the landlord-tenant relationship thus brought about between them must be distinguished from the normal landlord-tenant relationship in private housing. As in respect of the tenants of the Housing Board tenements adequate remedies must be provided to simplify for them the problems of estate management ; e.g. effective remedy for preventing the abuses of sub-letting, or contumacious default in vacating premises after title to their occupation has ceased ; speedy distress remedies for collecting rents, even deduction of rents from wages subject to necessary safeguards, etc. It is necessary at the same time to ensure that the industrial

relations of employers with their employees are insulated from these 'chores' and incidents of estate management. For this purpose it would seem desirable that these two sets of relationships are segregated so that no room is left for allegations and counter-allegation of victimisation by the employer or contumacy on the part of the employee.

It would seem that the best way of achieving this would be to secure provision of housing by employers to employees without the relationship of landlord and tenant arising between individual employers and their respective employees. If there was a separate authority which undertook to build houses and to administer the housing accommodation and collect rents, etc., it should be possible to dissipate many of the difficulties anticipated and apprehensions entertained by employers in respect of provision of employee housing.

Whether such a separate authority should be an independent industrial labour housing corporation with representatives of all interests on it or merely a corporate body formed by employers or certain groups amongst them and recognised for the purpose by Government or whether these activities should be tagged on to the Housing Board is a matter of administrative disposition for further consideration.

The provision of housing for industrial labour is already within the present purposes and objectives of the Bombay State Housing Board. However, we envisage a very much enlarged volume of building activity under this heading than hitherto; we also envisage that the recurring financial burden of this amenity will be shared in some measure by the employers. It is possible that for these reasons the Government may want to entrust the construction of this component of the programme to different auspices and to that end to set up an independent corporation differently constituted and differently financed. It may be pointed out that under the very large increase in the volume of public housing that we envisage there would be sufficient constructional activity to accommodate fully the energies of the Housing Board in respect of other components of the Housing programme even if the housing of industrial labour is sliced off and entrusted to a different authority. Besides, there can be all manner of co-ordination of activities at the *executive* levels to avoid duplication of technical organisation and waste of scarce technical personnel, even when statutorily and financially the two corporations are distinct and autonomous.

## **56. Finance for Industrial Housing.**

It remains to consider the category of inhibitions under (a) of paragraph 55 above, i.e. the very important questions of financial accommodation for industrial housing and the recurrent burden of the subsidised element, etc.

In the Bombay conditions the cost of a tenement of the minimum standard of accommodation under municipal regulations is of the order of Rs. 6,000. It is comprehensible that employers should grudge being asked to find this order of funds for capital investment per employee entertained by them in the Bombay area. Employers have to obtain funds from financing institutions for various purposes such as the additional block of capital for starting new units or undertaking "substantial" expansions of existing new units or renovation of plant and machinery and such other activities in the field of industrial production proper. They also of course need working capital, etc. It is comprehensible that an employer should argue that if he could raise a further Rs. 6,000 of long term capital he would want rather to undertake further additions or improvements or renovation of his block than lock up the money in the 'unproductive' activity of providing a tenement to house the additional employee for whom he would be creating employment. From the country's point of view as well, additional production and employment, are desiderata of the highest priority.

While these difficulties are comprehensible and while we agree that everything possible must be done to alleviate them, the Study Group reiterates its firm opinion that at any rate in the special conditions of the Bombay area there has to be an obligation on employers to help to provide housing for their labour. Indeed this is recognised at law and is a part of the policy of Government actually in force in this area over the last few years in respect of all additional labour taken on. While every effort may be made to reduce the burden on the employer and also to release his capacity for raising capital funds as far as possible for productive activities, it must be recognized as a matter of social policy that this responsibility at any rate in some measure, must be borne and discharged by Industry.

Shri Master and Shri Ante, however, feel that the aforementioned responsibility should be discharged by Industry as an act of voluntary decision and not as a result of compulsory direction.

Apart from raising money in the capital market long term funds are available to Industry from the Central Industrial Finance Corporation as well as from the State Finance Corporations and like financial institutions. We are not aware whether the requirements for housing are held eligible for accommodation in the case of employers in the Bombay area applying to these institutions for funds. If they are not eligible at present we would recommend that the Government of Bombay may represent to these authorities to make the provision of funds for this purpose eligible by them. The mortgage of the housing built to the financing agency will be a sufficient cover for the loan.

From such information as we have been able to collect it appears that the response of employers to the Government of India's scheme for housing of industrial labour has been very meagre. The total number of units put up under this scheme in the Bombay area until now is of the order of 2,000 or so. Under this scheme formerly loans were available to the extent of 37½ per cent. and subsidy to the extent of 25 per cent. against a total maximum cost of (i) Rs. 4,600 for a single storeyed and of Rs. 5,800 for a multi-storeyed one-room tenement, (ii) of Rs. 5,300 for a single storeyed two-room tenement and Rs. 7,250 for a multi-storeyed two room tenement, etc. We understand that these terms have been somewhat liberalized recently. It remains to be seen how far the liberalized terms evoke a more adequate response from employers. If they do not,—and we seriously doubt whether a response of anything like the volume requisite will be elicited by these liberalisations—the matter will need to be further considered.

In the meantime so far as the Bombay area is concerned we would like to suggest a resource which we feel will considerably help towards solving this problem of long-term finance.

The employees Provident Fund Scheme under the Employees Provident Fund Act, 1952 has to its credit substantial sums of money. The total balance of the fund as on 31st December 1957 for the Bombay region (including also the exempted establishments) was of the order of Rs. 44 crores and Bombay City's contribution to this is reckoned at about 66 per cent. of this figure.

The Provident fund accumulations standing to the credit of employees in the Bombay area are a fund pre-eminently suited for financing the capital cost of the housing of industrial labour in that area. Provident Fund accumulations being of a long-term nature are available for the long-term investment necessary for housing which is a long-term asset. The Provident Fund accumulations to the credit of an employee is of course meant for the use when necessary for the employee and his family. While the bulk of the corpus of the fund may collectively be used for this purpose, the individual accumulations of each employee must be available to him or to his dependants for the purposes for which the Provident Fund Scheme is devised. With the guarantee of the Government to both its capital and interest, it should be possible to organise the utilisation of the corpus of the fund in this fashion without prejudicing its availability for the individual needs of particular employees.

It is pre-eminently fair and just that the investment of the provident fund accumulations contributed by employees and their employers should be available to the maximum possible extent for ameliorating the conditions of housing of industrial labour in that particular area from which they are derived. Indeed anything to the contrary is obviously unjustified and unfair.

Leaving apart sufficient funds to meet the probable current disbursements there would still remain (at least for the next few years, which is the period we are concerned with) a very substantial corpus of funds available for such long-term investment in these accumulations. The annual accruals of the fund in the Bombay State area during 1957-58 were Rs 10½ crores. We urge the Government of Bombay strongly to represent for these funds being made available for this purpose. We understand that these funds have as at present been already reckoned in the overall resources of the country on the basis of which the current Five Year Plan has been framed. If that is so and if the situation cannot be forthwith remedied, it ought to be possible at least for the purposes of the Third Five Year Plan to make available these resources for financing the industrial labour housing programme in Bombay area. The industrial labour in Bombay which lives at present in shocking conditions of housing has an obvious and irrebuttable claim on these funds to the extent to which they are accounted for by the Bombay area.

The annual accretions to the fund arising out of the Bombay area are of the order of nearly Rupees seven crores. It is apparent that the utilization of these funds towards the housing of industrial labour would be a very substantial help towards finding resources for the annual programme of housing for industrial labour envisaged by the Study Group's Housing and Housing Finance Panel.

The Provident Fund balances are at present invested in Government securities. The Authority to whom long-term loans will be advanced out of these will have to undertake to pay to the Provident Fund account by way of interest on the loan a sum based on the annual yield of Government securities. Arrangements will also have presumably to be devised for eventual repayment of the loan by the Authority. Moreover the loans to the Authority will have to be guaranteed by the State Government both as to interest and principal. We do not see any insuperable difficulty about such an arrangement or any unwarranted risk to the State Government in the suggested obligation.

To encourage co-operative housing by employees, advances should also be liberally made from their provident fund balances to the employee fund holders.

Having taken stock of these resources the State Government should ascertain, in consultation with the employers, how far the balance of the capital resources, if any are needed, would be contributed by them.

#### **57. Reliefs to the Employer for Industrial Housing.**

So far as recurring cost is concerned a portion of it has already been shouldered by the Central Government in the subsidy element of the capital grant available towards the present scheme of Industrial Housing. If capital funds are found out of the Provident Fund

accumulations of the employees themselves, the Government subsidy may take the shape of a contribution towards the recurring subsidy element.

We understand that as at present Municipal taxes are leviable on the entire economic rental even in respect of subsidised housing and not on the subsidised rents. Obviously this is inequitable to the employer-landlord and is a deterrent to the provision of such subsidised housing. Likewise, we understand, capital and recurring expenditure on the provision of such housing does not earn for the employers appropriate reliefs and rebates in the assessment of their income-tax dues. This is also a gratuitous hardship, which it should be possible to remove. If these reliefs are granted we should imagine that the element of the recurring subsidy falling to be borne by the employer would be brought within his capacity to bear and we feel that this residual element ought to be borne by him.

Administratively the scheme that we envisage should permit of a great deal of variation. If particular employers or groups of employers wish to provide their own housing for their labour they should be able to opt out of the institutional arrangement, while retaining all the benefits viz., subsidy contribution by the Central Government, finance out of provident fund accumulations; special landlord-tenant relationship by virtue of the subsidised character of the housing provided, etc.; necessary safeguards to secure the safety of the Provident Fund advances and in virtue of the guarantee of interest to the Provident Fund would of course need to be provided. Also co-operative societies of employees should be able likewise to opt out of the arrangements if they so choose. All these details will need to be carefully worked out in consultation with the concerned interests.

In fine, we propose that employers' housing for their industrial labour ought to enjoy the same privileged position as the housing provided by the Housing Board enjoys—and for the same reasons—in all relevant respects, viz., in respect of facility of rent collection; powers of eviction and distress; municipal taxation only on actual rent and not on the subsidy element; relief from income-tax as the rentals do not represent a net income and overall in fact there is a loss, etc. When housing is subsidised it cannot be treated on the same footing as normal housing. We furthermore propose that a source of capital finance, which lies at hand, be availed of for a solution of the problem so as not to trench on the long-term financial accommodation commanded by the employer, leaving him to use it exclusively for his productive equipment. We suggest that the Central Government may bear as at present an element of the recurring subsidy. We feel that given these reliefs and this special consideration employers ought to be both able and willing to put up housing for a sizeable proportion of their employees.

We wish to present here, only the broad outlines of a promising line of approach. We would like to record our definite opinion that this vexed issue seems to us to be clearly soluble on practicable lines given understanding and co-operation by all and a lead by the Government.

Sarvashri Master and Apte wish to place the following opinion on record in this connection :—

“We feel that given these reliefs and these special considerations employers may find more favourable circumstance than those existing at present to put up housing for a sizeable proportion of their employees.

It was recently pointed out at the meeting held by the Indian Labour Minister, Sri Nanda, with the employers' representatives on 4th January 1959, that a recent ILO study shows that no legal or moral responsibility was imposed on the employers to build houses for their workmen in any important democratic country of the world. The Study Group, however, would strongly urge the employers that they should, under the existing circumstances, undertake to bear at least 50 per cent. of the element of subsidy in the rent that may be charged to their workers for the houses that may be provided for them either by the Government or by any other house building authority or corporation.”

#### **58. Problem of Jurisdiction of Local Authorities.**

The Industrial Location Panel have recommended that after the setting up of industrial areas and satellite town-ships, etc. outside Greater Bombay limits, these localities should be managed by separate town administrations to allow sufficient time to the industries started in these areas to establish themselves before they are burdened with taxation by local authorities. We endorse this recommendation.

In connection with the opening out of prospects for development on the mainland across the Thana Creek, it has been recommended by the Panels that steps should be taken to prevent speculation in land prices and also to prevent unplanned development in these areas. We endorse these recommendations.

Indeed we would like to make a wider recommendation in this connection ; a large centre of industry and population like the Bombay area exerts a powerful influence in adjacent localities even though technically they may be outside the jurisdiction of the local authority of the Bombay area namely the Bombay Municipal Corporation. We feel that it is necessary to provide an administrative and statutory arrangement whereby this kind of inter-relationship between the metropolitan area and the adjacent area under other local authorities



is recognized and suitably adjusted. In the course of the last two decades the limits of the Bombay Municipal Corporation were widely extended on more than one occasion amongst other things in recognition of such trans-border suburban developments. Indeed a good many of the present difficulties of the Bombay Municipal Corporation in the newly extended suburban areas arise out of the unplanned growth and development that took place in these areas previous to their inclusion in the Corporation limits and more particularly owing to the absence of any co-ordinating nexus between the Bombay Municipal Corporation and the former local authorities of Bandra, Andheri, Juhu, Kuria, Ghatkopar, etc. It has not been possible for the Bombay Municipal Corporation still to overcome and rectify some of this legacy. It is necessary to concert measures to avoid a repetition of these conditions in the future. It may, however, be mentioned that the only way to regulate such activities would not be to bring the areas within the jurisdiction of the Corporation as is sometimes suggested. Indeed the structure of the Corporation law as at present makes it difficult for the Corporation simultaneously to administer developed urban areas together with rural or semi-urban areas and communities not presently developed to the urban level but in the process of being so transformed.

In broad outline we feel that a solution must be sought in two directions :—

(a) Administrative and statutory arrangements should be devised whereby a measure of co-ordination would be introduced between the activities of local authorities of such outlying regions and the Bombay Municipal Corporation.

(b) If necessary the structure of the Municipal Corporation Act may be amended to provide that it may deal differently in respect of rates of taxation, regulation of building activity, etc. with rural areas included at any time within the Corporation limits.

If such measures are taken it may be possible to ensure that the activities in the "penumbra" regions of Greater Bombay are harmonized to the requirements of the metropolitan area.

The control of speculation in land would be one such aspect of statutory and administrative control.

## **59. Statutory Authority for establishment of Industrial Estates, etc.**

The Industrial Location Panel has recommended that the work of establishment of industrial estates, industrial areas and satellite towns, etc. may be entrusted to a separate statutory corporation to be constituted for the purpose. While endorsing this recommendation the Study Group would like to set out its context in greater detail.

As at present there is a programme under the sponsorship of the State Government for setting up 16 industrial estates in different areas in the State in the current Plan period. These industrial estates are however, principally for small scale industries. Apart from industrial estates for small scale industries it is necessary to promote industrial estates (which we may for purposes of verbal distinction call hereafter "industrial areas") for the location of larger units in different parts of the State having in view the prospects of power, water supply, railway sidings, etc. in the proximate future. Under the programmes of rural electrification carried out and projected by the State Electricity Board as well as with the commissioning of the power of the Koyna project large areas in the country-side would be served by electricity. This opens out great possibilities for promoting the setting up of small and large industries in the country-side incidentally thereby carrying out a programme of industrial decentralisation. The provision of readymade industrial plots with the service of all necessary utilities in industrial areas set up at suitable locations is obviously an important administrative measure for promoting and hastening this process.

In our opinion such activities would be particularly apt for being entrusted to a separate statutory corporation. The policy aspects of the matter namely the number of such industrial areas, their location, their sizes, the programme of development, etc. may be decided by Government. The actual execution of the projects, however, would probably be expeditiously and competently carried out if the activity was entrusted to a separate statutory corporation instead of being conducted departmentally. As and when an industrial area is developed and plots sold out the Corporation would be able to reimburse itself of the funds invested initially by it and apply the funds once again towards similar investment elsewhere. In this fashion a relatively small corpus of funds could be revolved to develop a large number of industrial plots in the selected industrial areas. The administrative structure of a corporation if set up for this purpose could well be on the lines of the Road Transport Corporations Act, 1950, and similar other Acts constituting corporations under which powers for giving directives on matters of policy are reserved with the Government and the detailed administration is entrusted to the board of the statutory corporation.

#### **60. Separate agency for carrying out long-term projects.**

There is one more important issue in the field of "Agencies and Instrumentalities" which the Study Group must consider.

The programme of activities that we have set out in the foregoing falls to a very considerable extent in the field of the Bombay Municipal Corporation. The Bombay Municipal Corporation Act,

1888 and indeed all other similar municipal enactments are so framed that apart from the wide range of duties and responsibilities, obligatory and optional, charged on the Corporation practically all *residuary* matters relating to amelioration or welfare of civic life of the municipal community are left within the jurisdiction of the Municipal Corporation. In that sense legally all the residuary activities not chargeable on other authorities would fall within the legal competence of the Municipal Corporation.

Nevertheless, it is a point for consideration whether for carrying out some of the long-term programmes which we have envisaged in our report it is not necessary to consider the setting up of a separate statutory authority of the nature of a development corporation for the city or an improvement trust. We have envisaged for instance in the above programme the carrying out of large reclamation schemes (even apart from the reclamation of Blocks III to VI in the Colaba area which possibly the Bombay Government might want to carry out departmentally in continuation of the activities of its former Development Department) accounting for a total area of several thousand acres. Much of these creek lands apparently vest in the Government. The borrow areas most convenient for the necessary filling may also lie in some cases outside the municipal jurisdiction. An Agency for carrying out all these reclamations and selling out the plots after development will have anyhow to be thought of. It is for consideration whether to such an Agency other duties could not also be assigned with advantage.

To illustrate; there is the problem of slum clearance and rehousing of slum dwellers; there is the programme for carrying out large scale acquisitions for securing land for purposes of recreation and other community requirements in the area of the island; there is the question of reclaiming the Mahim-Bandra-Sion area and laying down an alternative business-cum-commercial centre in a portion thereof.

The suggestion about laying down in advance of the development a grid of cross communications in the suburban areas alongside and between the Express Highways would also seem to fall appropriately within the sphere of duties of an improvement trust or development corporation. By the very nature of things it is difficult to draw a clear line of demarcation between the proper activities of a Municipality and improvement trust in the same area. In any case there has to be the closest possible co-ordination at both the level of policy-making and execution between two such agencies even if it is not considered unnecessary to set up a separate agency apart from the Municipal Corporation. While it is conceivable that the Municipal Corporation would itself carry out all the above responsibilities adequately—and of course under the law it is

fully within its competence to undertake to do so—it would be a comprehensible view to take that the prospects of implementation of such a programme might be reckoned to improve if the long term projects are distinguished and segregated from the day to day running of the Municipal administration. Generally speaking an improvement trust as conventionally constituted would have a measure of the official element in it, though of course, it need not be in a majority; its tenure and membership would also provide for a greater measure of continuity in the execution of projects.

We must record here that Shri Modak and the municipal representatives feel that the Municipal Corporation would be able to discharge all these responsibilities if a separate department is created within the municipal administration and charged exclusively with the carrying out of such a development programme. Shri Master also shares this opinion.

The Bombay Town Planning Act, 1954, imposes the duties of preparing a development programme etc., on the Municipal Corporation. This would not, however, necessarily conflict with an arrangement under which some of the development schemes are sliced off and made over to a separate statutory authority. The Municipality would ascertain and provide in its development scheme for the requirements of this as of other bodies.

There would be one further distinct advantage about the creation of such a separate Development Authority. We reckon that the reclamation schemes would bring in, in course of time, quite handsome revenues and profits (even if lands are awarded at less than the market price for purposes of "public housing" and other requirements with a public purpose element in them) out of the sale and lease of reclaimed lands, most of which vests in Government. It is only legitimate that such proceeds should be applied in the main towards the betterment of the city and to that end the setting up of such a separate Authority with the responsibility of carrying out reclamations as well as other assigned developmental responsibilities would not perhaps be unwelcome to the Corporation. The Municipal Corporation will have its financial as well as organisational resources stretched very considerably to meet the requirements of the programmes we have suggested and perhaps it would not be loath to share a part of its burden and responsibilities.

We have set out these pros and cons in order that they may receive due consideration at the material time. In administrative matters the ultimate test lies not in the perfection of machinery but in its general acceptance and work-a-day performance. If the Bombay Municipal Corporation essays forth to carry out all the aspects of this programme it would be unnecessary to consider

setting up a separate authority, except perhaps only to carry out the reclamations. On the other hand, if it is found that the long term projects might stall and get retarded in their execution by their mixing up with exigencies of day to day municipal administration, the Corporation itself may wish it considered whether this sector of activities may not be sliced off and charged on that separate authority.

#### **61. A round-up of the financial implications of our recommendations.**

In the foregoing paragraphs various recommendations have been made many of which would entail a financial implication. In this paragraph we have attempted to present at one place a summing up of the financial incidence.

We have envisaged a public housing programme of 20,000 tenements annually over and above 5,000 tenements by private builders. Adapting the break up of this figure as illustratively given by the Housing and Housing Finance Panel, in the light of the variations that we have made, the following numbers of tenements will have to be put up by the different public authorities :—

(1) Bombay Housing Board	... 6,000 tenements.
(2) Industrial and Co-operative Societies.	2,000 tenements for their members.
(3) Central and State Governments, Railways, Municipal Corporation and other Governmental agencies	4,000 tenements for their own employees.
(4) Industrial labour housing, possibly by an Industrial Labour Housing Corporation	8,000 tenements for industrial housing.

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Total ... 20,000 tenements.

The Housing and Housing Finance Panel has estimated that these would cost roughly about Rs. 16 crores per annum in all.

The above programmes of construction will have to be carried out by the respective authorities. The Housing Board will finance its programme out of the financial allocations it receives as at present and we do not need to compute the cost involved as an item resulting from our recommendations. The Co-operative Societies also will be financed as at present by the Bombay Co-operative Housing Finance Society. In our recommendations we have envisaged that the industrial labour housing will be financed principally out of the Provident Fund accumulations and the excess of current appreciations over disbursements of the Bombay area to the same Fund. So far as departmental housing by different Government or semi-Government agencies is concerned the provisions for the finance

required will have to be made by the respective Departments and public authorities in their own budgetary requirements. The 2.75 crores of rupees to be found by the Private investors from their own resources and the 2.50 crores of rupees to come for them out of borrowing from financing agencies, as stated in our illustrative break-up of the housing programme at paragraph 22 ante, would of course come from these sources respectively.

The cost of developing an area of a thousand acres as building sites ahead of and in preparation of the constructional activity would fall on the Municipal Corporation. The annual burden of this is computed at Rs. 140 lakhs. To the extent to which betterment levies would be leviable on benefited lands in the virgin suburban areas the Municipality would be able to reimburse itself for the capital outlay of laying out the communications. Apart from this the development of a thousand acres of building sites and the consequential increase in the stock of additional housing would in course of time bring in corresponding increase in the property tax receipts of the Municipal Corporation.

So far as slum clearance is concerned, there is a specific scheme for slum clearance for which substantial grants and subsidies are offered by the Government of India.

The establishment by the Municipal Corporation of 20 industrial estates in the island and 25 estates in the suburbs and 10 industrial areas in the suburbs has been suggested. The Industrial Location Panel has estimated that the capital cost for these would total to about Rs. 8.7 crores. This is of course an initial investment which will be returned to the Corporation by the allottees of the industrial plots either straightway if they purchase the allotments or over a period of years by way of the rentals if they only hire their allotments.

It has also been suggested that satellite towns should be developed in districts in close proximity to Bombay. It is difficult to work out the estimates for the scheme of satellite towns as this would depend upon locations, extent of development necessary and proximity to various essential amenities. The formation of a separate Corporation, to include among others this purpose, has been suggested. Such a corporation would be able to raise the necessary funds for its initial investments which will be returned to it by the allottees of the industrial plots in course of time.

Several recommendations have been made for the easement of traffic and for removal of congestion of traffic. The Express Highways and the bridge over the Bassein creek have already been included in the current Five-Year Plan of the State Government. The Municipality also has already a scheme for the improvement of the two main traffic arteries in the north-eastern and north-Western suburbs.

Specific provision will have to be made for the construction of the contemplated bridge over the Thana creek. It is very roughly estimated that an amount of the order of some Rs. 9 crores or so would be required to provide for a combined bridge with double railway tracks and a 24 feet carriageway. The cost of the bridge presumably will be shared between the Railways, the Central and State Governments and the Bombay Municipal Corporation. Apart from the possibility of levying a special toll or surcharge on railway fares to reimburse for this considerable cost, if steps are taken to mop up the capital appreciations in land values on the other side of the Thana creek as a result of the construction of such a crossing, sufficient funds would have been found for financing and paying for it.

Apart from these large specific undertakings numerous other improvements for traffic circulation have been suggested. These improvements would however fall within the normal scope of activities of the Corporation.

It has been computed that it will be necessary to make provision for about 1200 to 1400 acres of land in the island for public purposes a minimum of 500 acres for use as open spaces, 650 odd acres for school buildings and playgrounds, 50 acres for hospitals, 60 acres for industrial estates etc. If this programme is spaced over a period of 10 years it is roughly computed that an expenditure\* of about 2 to 2½ crores of rupees will have to be incurred annually.

The consideration of several sites for reclamation has been recommended. The reclamations would of course be undertaken in each case only if economically the value of the land thus made available would justify the expenditure. Therefore the reclamations in general would only entail a capital investment which would be quickly repaid.

Three large reclamation schemes have been specifically recommended namely the Bandra-Kurla region; the Vadala-Chembur region, the remaining blocks of the Back Bay Reclamation Scheme. Presumably these reclamations would be taken up and carried out by the State Government or by a separate Reclamation Authority or Development Corporation which would receive capital allocations for the purpose from the State Government. While the reclamations would involve a substantial initial investment, we have no doubt that the investments will be more than paid back in course

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\*This estimate is made on the basis of the land underlying milch cattle stables acquired by the Bombay Municipal Corporation after 1948 when the cattle were removed to Aarey; the cost herein came roughly to Rs. 1½ lakhs to 2 lakhs per acre.

of time. In fact we would expect, as we have stated in the foregoing paragraph 60, substantial profits to accrue from these operations. We have also indicated that in our opinion these profits should be hypothecated towards improvements to the city.

For the development of the Elephanta islands as a recreation centre there is a capital provision in the current Five-Year Plan of the State Government. All that we have suggested is a change of agency.

The provision of a park of about 65 acres adjoining the Race Course area which we have suggested for being undertaken immediately should be capable of accomplishment at a very little cost to the Corporation. The shifting of the slaughter house at Bandra to its new location at Devnar is an approved scheme of the Corporation already under way.

It will be evident however that the financial incidence to the Municipal Corporation in the sum total of all these suggestions would be quite considerable. This is however inevitable and only to be expected having regard to the position of the Corporation as the main agency for organisation of civic life in the city. We would point out however that most of the new lines of activity suggested, while they entail an initial outlay, would be self-liquidating over a period of time.

Acquisitions for open spaces, community requirements like schools and hospitals etc. represent of course a normal call on municipal finances; and we have recommended\* how the size of the burden may be limited and the incidence spaced out over a period. The "loss" that the municipal finances will suffer due to the rateable value of public housing being reckoned at the net subsidised rental is only a necessary extension of a principle already accepted in respect of the housing put up by the Housing Board. In fact, the increase in the stock of housing that the implementation of the programme of public housing suggested by us would bring about, would eventually result in a significant improvement in the Municipality's property tax receipts.

It must be acknowledged that nevertheless all these suggestions in the sum total will entail considerable capital outlays—even if largely they are eventually reimbursed—to the Bombay Corporation. They would also entail a considerable addition to the present size and range of its responsibilities. It is quite possible that a review of the

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\*Shri Master and Shri Apte are, however, opposed to such limitation and phasing of the burden of compensation for acquisition as stated in paragraph 23(d) ante.



entire resource position of the Corporation may have to be made by it in the light of the fresh responsibilities to be assumed. Having regard however to the credit that the Corporation justly enjoys for raising capital funds and the character of these new obligations, most of which will be self-liquidating, we do not foresee *prima facie* any difficulties that could be regarded as insurmountable.

## 62. Concluding remarks.

The various civic problems of Bombay city though actually very complex and grave are all essentially soluble. Indeed most town planning problems must be and are intrinsically soluble. Most of the present day difficulties and complications are created by 'Drift' and lack of co-ordination; conversely, most of the difficulties can be surmounted and complications resolved if there is a planned approach and machinery for bringing about the necessary measure of co-ordination. Even the question of finance is by no means beyond the feasibilities of practicable politics. Grasped with determination and tackled with vigour all these issues can certainly be solved within a reasonable space of time.

The Group has attempted to examine in broad outline the main issues pertaining to the outstanding civic problems of the Greater Bombay area. It has analysed the basic causes leading to its grave "malaise" and set out the main elements of the solutions. The full details of different programmes will have to be worked out by the appropriate authorities who will have to execute them. We have also considered the question of agencies for the different important programmes we envisage and even set out our recommendations to ensure the necessary co-ordination amongst the concerned authorities. Our recommendations are not of course and could not by the very nature of things be a ready-made plan of action. We, however, hope that they constitute a coherent framework within which detailed and specific action programmes could be formulated.

We are indeed conscious that most of the ideas and lines of activity recommended herein are trite and have been often mentioned before and many of them indeed almost "leap to the eye" as the obvious solutions of the different problems. Perhaps only the various pieces have been set up within a single comprehensive framework for the first time.

Nobody can be more conscious than ourselves as to how much more important actual implementation is in these matters than mere ratiocination. That, however, necessarily lies outside the purview of what is professedly a mere Study Group. In propounding our solutions we have always harkened to the call of practicability.

We can only hope that our suggestions commend themselves to the concerned authorities; and we do pray that even if they disagree they would proceed to formulate and apply their different measures as they deem right. For nothing would be worse in any case than Inaction and Drift !

In many ways we feel that the present time is very opportune for measures of city improvement. The results of our study would be available for use in the framing of the Third Five-Year Plan presently on the anvil; the position regarding steel which might otherwise have completely blocked all possibilities of any ambitious housing programme promises to improve from within a few months and steadily thereafter; with the commissioning of the first stage of the Koyna Project in 1961 and of the second stage in 1964 onwards as well as with the coming into commission of other rural electrification schemes a large measure of electrification in the countryside would be available to serve as power-grid and a basis for decentralisation of industry in the State; with the Third Five-Year Plan in the close offing we are obviously on the eve of still further intensification of industrialization in the country and a still more determined attempt to increase avenues of employment to the country's idle man-power; a charting out of policies ahead of such a development, which is bound to have profound repercussions in the Bombay area, is clearly opportune.

We have constantly borne in our mind the financial incidence of the suggested improvements. It is obviously no use recommending huge schemes involving astronomical figures of investment which must necessarily remain only on paper. We have limited the size of our recommendation in accordance with what we considered a realistic view about practicability. Most of the lines of activity are financially allocable to agencies already operating in the respective fields. The residual burden that will fall on the civic authorities and principally on the Bombay Municipal Corporation, while by no means inconsiderable, would still be within the bounds of practicability.

**We build our towns and then our towns build us !**

The absence of playgrounds and recreational spaces for children as well as the citizen-body; school buildings unworthy of the coming generation; a deficit of housing to the extent of a third of the total population with all that this shortfall means to the lower income group categories who have to bear the entire incidence of the deficit; the squalor and disgrace of slums accounting for several lakhs of the population; large proportions of working people perforce living single and bereft of domestic life with all the inevitable

effect of this deprivation on social vice ; ceaseless squabbles, litigation and a chronic state of "cold war" between tenants and landlords ; the degradation and shame of queues and quarrels over water taps and the use of sanitary conveniences ; the daily grind to several hundred thousand persons who have to travel 1½ to 2 hours each way in choked trains to and from their work ; a myriad scowls and distempers attending upon Traffic as it daily snarls up at a hundred places in trying to force its way through a wholly inadequate circulation system : this is the unvarnished picture of living conditions generally in which the 43 lakhs of population in this "Urbs Prima in Indis" have to subsist. This number represents no less than 10 per cent. of the State's entire population. Yet it is really unnecessary that such large numbers of people in the premier city of the country should be consigned to live such squalid, stunted fractious lives. The problem is entirely soluble. If it is tackled with determination, we make bold to say, within a couple of years distinct improvements ought to be visible and within 5 years the problem would have been set well on the way to a solution. It is no more and no less than a challenge to the civic statesmanship and organisational capacity of the authorities concerned.

The city of Bombay waits to be made worthy of its citizens !

S. G. BARVE, *Chairman.*

M. A. MASTER,

N. V. MODAK,

K. V. APTE,

C. R. DESAI

J. E. CASTELLINO,

M. R. MANDLEKAR,

JASJIT SINGH,

K. B. CARNAC,

S. V. DESAI,

I. B. PATEL, *Member-Secretary.*

Sachivalaya, Bombay,  
26th February 1959.



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## APPENDIX I

### SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

#### Growth of Population.

There has been a phenomenal increase in the population of the Island of Bombay during the last about 18 years from 1941 to 1958. During this period the population has shot up from 14·89 lakhs in 1941 to an estimated 31 lakhs at the close of 1958.

Projecting the same rate of increase in the future, the population of the island over the next ten years would grow to the enormous figure of 50 lakhs on the basis of the formula adopted by the Director General of Health Services, Government of India, for estimating increase in population. On the same basis of calculation, the population of the suburbs which is estimated at 12 lakhs at present will grow to a figure of 25 lakhs.

The enormous increase in population so far has resulted in congestion of traffic, deficiency in open spaces, play-fields for schools, over-crowding in trains, over-crowding in houses, creation of slums, etc.

There is a meagre area (337 acres) of public open spaces available in the island ; besides, it is very unevenly distributed, large portions of it being badly situated with reference to accessibility from the thickly inhabited areas in the city. The increased population has also constituted an increasingly intolerable burden on the sanitary services and public utilities of the island.

Any prospect of an increase in this population, which is bound to occur, unless there are specific measures for discouraging the growth, must, therefore, be viewed with grave concern and alarm. The problem has thus become quite desperate and remedial measures which, by the very nature of things must take a considerable time before they become effective, must be set in motion without the slightest delay.

#### Concentration of Industries.

A similar situation exists in respect of industries also. Greater Bombay having an area of only 169 square miles has 3,539 registered factories out of a total of 11,539 such factories in the State. Thus "Greater Bombay" accounts for 1/3rd of the total number of factories in the State. Of these 3,500 odd factories in Greater Bombay, as many as 76 per cent. are located in Bombay Island which accounts for only 26·19 square miles out of the total "Greater Bombay" area of 169 square miles. These 3,500 odd factories in Greater Bombay account for over 44 per cent. of about 10,00,000 workers employed in the registered factories of Bombay State. Eighty-five per cent. of the factory employment in the Greater Bombay area arises within the Bombay Island.

During the period from 1951-57 there was an increase of 336 factories. In the same period the average number of daily workers increased from 3,83,892 to 4,45,000.

Of the 459 licences issued during recent years in Bombay State for schemes of establishing new undertakings, substantial expansion of and manufacture of new articles in the existing undertakings, as many as 265 licences are for Greater Bombay.

### **Traffic.**

Geographically, the island of Bombay is about 10 miles long north-south and about  $2\frac{1}{2}$  miles wide east-west. With the business centre located in the south, viz., in the Fort area, the movement of traffic is southwards in the morning and northwards in the evening. To cater for these enormous streams of traffic there exist only two main north-south roads.

In spite of very considerable expansion in services provided by the B.E.S.T. as well as the suburban railways during recent years, the traffic has more than outpaced the increase in these facilities.

### **Consequences of existing Congestion.**

(a) *Housing inadequacy.*—The Housing situation in Bombay City was already very critical even two decades ago. Large masses of the population resided in slums and in extreme conditions of overcrowding at the rate of 6 to 9 persons to the room. These conditions have been still further intensified since. During this period while the population has grown phenomenally, there has been very meagre addition to the total housing accommodation available for their residence.

It is reckoned that in the Greater Bombay area the total housing accommodation available at present is enough to accommodate about 28 lakhs of persons on reasonable standards; that is to say, there is a net present deficit in housing accommodation of the order of  $2\frac{1}{2}$  to 3 lakhs of tenements apart from replacement of houses likely to fall down. The housing programme for the Bombay area must therefore cope with the need for clearing this huge backlog of housing accommodation over and above keeping pace with the growth in population.

Apart from the general paucity of housing accommodation, 144 slums covering a total area of 877 acres, have been listed by the Municipality. These account for a total of 83 thousand odd families and a population of over 4 lakhs. Besides, a very high proportion of the city's population, perhaps of the order of 40 to 50 per cent. lives at the rate of 7 persons or more in a single room.

(b) *Shortage of open spaces, etc.*—The problem of open spaces, recreational areas and land essential for community requirements arises in its most intractable form within the island of Bombay. At present the island of Bombay has only 747·18 acres of parks and play-fields which includes only 337·27 acres of parks open to all as against an estimated requirement of 4,500 acres for a population of about 30 lakhs.

Only a small proportion of schools (less than 25 per cent.) are in their own buildings; hardly any school in the city has an adequate compound or a sufficient playground and almost all rented premises used by the Municipal schools are unsuitable due to odd sizes of rooms, insanitary surroundings, bad lighting, etc.

A minimum additional space of 115 acres for purposes of school buildings and 355 acres for playgrounds is required for the existing schools and a further 176 acres for additional classes and playgrounds for the additional pupils to be admitted to school in the next ten years is essential in the Island even on conservative standards of provision for these purposes.

*Lack of Development of Mofussil Areas.*—Absence of essential facilities like transport, electricity, water supply, etc., needed for the development of the mofussil areas and their existence for a long time in Bombay have attracted industries towards Bombay. Moreover the special additional facilities of the port, the existence of well-established markets and the large facilities obtainable from banks and commercial houses in the city and several other factors of a similar nature, which it takes long to provide elsewhere, have led the industries to establish in the Greater Bombay area and more especially in the Island of Bombay.

*Lack of Development of Suburbs.*—Within the Greater Bombay area, the local concentration of population in the confines of the Bombay Island has been caused and accentuated by the tardy and haphazard growth of facilities for residential settlement in the suburbs.

The facilities for movement of traffic from the Island to the suburbs and within the suburbs have been and continue to be very inadequate and unsatisfactory. Vast areas in the Salsette Island within the jurisdiction of the Municipality are open and available; but there are no road communications or provision of water supply, drainage and other public utilities to facilitate residential and other development. The two main existing arteries leading into the Suburbs, viz., the section of the Bombay-Agra road from Kurla to Mulund and the Bandra-Ghodbunder Road, which have to bear the

greatest load of the suburban traffic, are grossly deficient to cope with it. Large stretches of the latter road are poorly surfaced, narrow and bottle-necked at many points.

A large part of the considerable industrial development that has taken place in the Suburbs in recent years has been unplanned and hapazard, being largely of the nature of ribbon development along a few existing lines of communication leading to a great accentuation of traffic conditions on these narrow arteries leading to the suburbs.

While the jurisdiction of the Bombay Municipal Corporation was extended twice in recent years, there has not been corresponding development of planned expansion of communications and utilities for steadily opening out additional areas for residential and industrial settlement in the extended suburbs.

While local markets have established themselves in some of the suburban localities, the centre of gravity of business and commercial activity has continued to be located within the island of Bombay and particularly towards its southern tip thus resulting in a lot of avoidable traffic from the suburban areas across the whole length of Bombay Island.

*Shortfall of Housing.*—Analysis of the volume of constructional activity of house building in the Bombay area over the period 1951-52 to 1955-56 has shown that on an average 5,000 tenements were constructed annually during this period. Of this, 36 per cent. of tenements are accountable to the activities of public authorities, the remaining 64 per cent. being accounted for by private house building enterprise. Of the tenements put up by private enterprise, 62 per cent. have consisted of blocks and only 38 per cent. were one and two room tenements. One and two room tenements formed only 24 per cent. of the total tenements put up by all agencies.

The various provisions of the Rent Act and the burden of Central, State and local taxes work as a deterrent to the investment of fresh capital into the house-building activity. Private house building enterprise has accordingly been unable to provide significant housing accommodation in recent years towards the requirements of the vast majority of the working class, of the lower income groups and a large portion of the middle and lower middle classes as well.

Unless there is a massive programme of public housing, under which housing accommodation would become available at subsidised rentals, the housing problem in Bombay City for the lower and middle income groups and working classes cannot be solved.



*Planned use of land.*—The report of the Land and Open Spaces and Other Community Requirements Panel reveals the acute dearth of land in the Island even for meeting the bare necessities of land for schools, play-ground and for recreational purposes, even apart from housing. The present situation can be retrieved or at least ameliorated only by introducing planned utilisation of the land that is still available or could easily be made available.

Having regard to the extreme paucity of unbuilt open spaces in the island, the bulk of future developmental or house-building activity must obviously be located in the suburban areas outside the Island of Bombay.

Even the provision of the land necessary for priority requirements within the Island will not be practicable unless measures are taken for appropriating sites as they become available towards community purposes at reasonable prices by (i) reclamation of sites, (ii) earmarking of open spaces and other sites required for community requirements, (iii) appropriating towards such requirements, these sites as they happen to become available.

### **Location of Industries.**

(a) One of the most important contributory factors towards the present congestion of population in the Bombay area and its concomitant evil effects, has been the lack of a definite policy regarding location of industry. A definite industrial location policy in the future is a *sine quo non* for preventing further congestion of industry in the Bombay area.

(b) *Future location of Industries in the Island.*—No new industrial units should ordinarily be allowed in the Bombay island area, exceptions being made only in the case of industries processing large quantities of imported raw materials mainly for export of finished products, or specially dependent on port facilities or inseparably ancillary to existing units already located there.

Applications for substantial additions to or/and manufacture of "new articles" in the existing industrial units located in the Island area, under the Industries (Development and Regulation) Act, 1951, should not ordinarily be recommended to the Government of India by the State authorities. This rule should also apply to large scale units not amenable to registration under the Industries (Development and Regulation) Act, 1951. Exception to this general rule may be made in deserving cases especially where a scheme forms an integral part of the process carried on in an existing industrial undertaking, provided always that such a scheme does not envisage appreciable increase in employment and/or undue increase in traffic

loads and such expansion is for the purpose of rehabilitating a losing unit or for improving the working efficiency of the existing unit or balancing an existing industrial undertaking.

Similarly, no new small scale factory should also be permitted to be established in the Island area, exceptions being made in the case of units catering to the needs of other industrial units and requiring to be in close proximity of that unit. Such units, should, however, be allowed only in industrial estates or industrial zones in the island.

There need be no bar as a rule to cottage scale units being allowed to remain in the Island or increasing their activities subject nevertheless to municipal regulations as these are not likely normally to add appreciably to the congestion.

(c) *Non-conforming Industries*.—There are certain industries known as “non-conforming” industries. These are located in areas designated as “non-industrial” or residential as per the land user arrangements proposed by the Municipality. (Under the Development Plan).

The progress made in the removal of such non-conforming users to industrial zone has been very tardy so far only 2 per cent. of such users having shifted upto now.

As far as possible incentives should be created and facilities given to them to bring about the desired shift before applying appropriate legal sanctions. To this end we commend the proposal of the Industrial Location Panel to set up twenty industrial estates in the island of Bombay and twenty-five more industrial estates in the suburbs to afford ready facilities to these non-conforming units to shift themselves.

(d) *Establishment of Industries in the Suburbs*.—Those industries which can conveniently establish themselves outside Greater Bombay should not be allowed to be established even in the suburban limits.

Industries which depend to a large extent on bulky raw materials like minerals, agricultural and forest products, etc., or intermediate products like oil cakes, etc., should be established in the mofussil areas where such bulky raw materials are available.

Establishment of large scale industries requiring heavy machinery should, if allowed in the Greater Bombay limits, be permitted only on the recent extensions of the Bombay Municipal Corporation limits, viz., areas beyond Bhandup on the Central Railway side and beyond Jogeshwari on the Western Railway side.

We feel that conditions should be created to enable more and more small scale units to come up in a planned manner in the suburbs.

It may also be considered whether further area in addition to 12.47 square miles of land allotted for industrial use in the suburbs should not be made available in the suburbs.

### **Satellite Townships.**

In order to encourage the establishment of new undertakings outside Bombay and to provide incentives to the existing industries to go out of the Island, satellite townships should be established within a few hours' distance from the City of Bombay and in districts in the close proximity of Bombay, viz., Kolaba, Thana, Nasik and Surat.

### **Development of Suburbs.**

The obvious remedy for combating the trend towards concentration of industry and population in the Island would be the rapid and planned development of suburban areas.

If the suburbs are to develop adequately the Railways will have to provide all possible additional facilities. The contemplated programme of the Railways to increase their carrying capacity should be expedited and extension of the Railway platforms introducing new signalling devices adding to the stock of carriages, etc., should be undertaken to that end as early as possible.

*Rail/Bus Concessions.*—In order to encourage a greater dispersal of the population in the suburban areas we would recommend "flattening" out of rail and bus fares on the principle of telescopic rates for journeys from Andheri to Bhayandar on the Western Railway and from Kurla to Thana on the Central Railway.

*Express Highways.*—It is necessary to proceed with the work on the Eastern and Western Express Highways with the greatest possible urgency and to complete them as programmed before the end of the Second-Five Year Plan period.

We also recommend that the existing main roads in Greater Bombay should be sufficiently widened as early as possible and brought up to modern standards to meet with the increasing needs of growing traffic.

The Municipal Corporation should also plan, and progressively undertake the construction of the side-roads, cross-roads and Railway over-bridges to provide access to the adjoining areas along and between the Express Highways.

*Neighbourhood Units.*—We commend the proposal made by the Housing and Housing Finance Panel for the establishment of neighbourhood units roundabout Suburban Railway Stations like Andheri, Kurla, Malad, Chembur, Ghatkopar, Bhandup, Mulund, etc., making them as far as possible self-contained units with all day to day amenities for the local population.

### **Extension of Suburban Areas.**

Suburban development will be greatly facilitated if in addition to the existing suburbs the opening out of other areas which are less distant than some parts of the existing suburbs is also undertaken. Large areas are available on the other side of the Thana Creek which could be opened out by constructing a rail-cum-road bridge across the creek, as recommended by Communications and Traffic Panel.

### **Rail-cum-Road Bridge across the Thana Creek.**

It is strongly recommended, that the highest priority should be given to the building of a rail-cum-road bridge across the Thana Creek connecting the Island to the mainland. The bridge will have to be adequate for two (double) tracks of railway lines and for four lanes of road traffic. The necessary technical investigation of the project may forthwith be undertaken to finalise the most economical location and design of the crossing.

### **Bridge on the Bassein Creek.**

The early construction of a road bridge across the Bassein creek in the north at the extremity of the Salsette Island, which is already projected as a part of the Bombay-Ahmedabad National Highway, will also open out fresh areas for trans-suburban development.

### **Ferry Service across the Harbour.**

We would suggest to the authorities that the feasibility of a regular all the year round Ferry service across the harbour should be explored.

### **Alternative Centre of Business.**

One of the important measures which would help in discongesting the island of Bombay and relieve to some extent the flow of traffic towards the south would be to establish another new centre of activity in the central part of Greater Bombay, say in the Bandra-Kurla area where some of the important Government offices, banks, commercial and industrial houses, possibly also new educational institutions, insurance offices and market places could be located.

It would also be desirable to reserve adequate areas under the 'development plan' (under the Bombay Town Planning Act, 1954) which is under the preparation of the Municipal Corporation for the eventual establishment of a market centre further north in the Salsette Island as well.

### **Reclamation of Land.**

It is essential for securing relief in the existing situation of congestion and concentration of industry in the island to undertake reclamations wherever practicable for increasing the pool of available land within and in the immediate vicinity of the Island of Bombay. We would particularly recommend the following reclamation proposals relating to large areas of land :—

(i) Blocks Nos. 3 to 6 in Back Bay Reclamation Scheme (about 575 acres) ;

(ii) Area bounded by the Western Railway on the west, Santa Cruz Airport on the north, Bombay-Agra Road on the east and Mahim-Dharavi Road on the south (about 2,135 acres) ;

(iii) Creek areas between Wadala and Chembur (about 2,700 acres).

There are possibilities of obtaining dredged material from the dredging operations to be carried out by the Port Trust Authorities in the Bombay Harbour area for the reclamation of the first area.

We understand that the Municipality already have got a project for carrying out reclamation in the Bandra-Kurla area by stages by the Dutch method of reclamation which may be expedited.

### **Planned Programme of Public Housing.**

The housing problem in Bombay City, especially for the middle and lower income groups and the working classes, cannot be solved unless a massive programme of public housing is undertaken.

In any programme of public housing the provision for housing for employees of public authorities and the provision of housing for industrial labour will have to constitute very large components of the housing programme, and we strongly recommend that, in the special conditions of the Greater Bombay area, it is essential that the Central Government, the State Government and other public authorities recognise their responsibility for providing housing to a substantial portion of their employees, especially of the lower income brackets.

We broadly endorse the programme of Public Housing suggested by the Housing and Housing Finance Panel for the construction of 25,000 tenements per year as under:—

The Bombay Housing Board. 6,000 tenements mainly for industrial workers and partly for persons coming under the low income group.

The Municipal Corporation, 4,000 tenements for their own employees.  
the State Government, the  
Central Government, the  
Central Railway and the  
Western Railway together.

Individuals and Co-operative Societies. 2,000 tenements for themselves and their members.

Appropriate Agency ... 8,000 tenements for housing employees of industrial and commercial establishments other than those provided for by the Housing Board.

Private investors ... 5,000 tenements for middle class people.

Total ... 25,000

In the special circumstances of the Greater Bombay area employers have also a responsibility in connection with the housing of their labour. A proper scheme may be drawn up for implementation, in consultation with all concerned interests, of the programme of housing for industrial labour.

### Regulation of the Use of Land.

Within the island area it is essential to undertake a comprehensive land use survey and analysis forthwith and to prepare a detailed and specific plan for future land use requirements making allowance for the requirements of the community. The position about land in the island of Bombay is so difficult that the provision of land necessary for even priority requirements of the different neighbourhoods within the island will not be practicable unless steps are taken for earmarking necessary spaces for community requirements; and for appropriating towards such requirements such sites as they become available.

To carry out such a policy the following steps are necessary :—

- (a) a detailed survey of land use as at present ;
- (b) an assessment specifically of requirements of localities for future land use ;
- (c) designation of specific plots for particular requirements to be so appropriated as they become available.
- (d) powers to enable the local authority to appropriate such land towards such purposes as and when opportunity offers.

A phased programme for the acquisition of land at the rate of 100 to 120 acres a year over a period of 10 to 12 years would have to be adopted to complete the total acquisition of land necessary for essential community purposes. Compensation for the land designated for *all public uses* under the development plan which is being prepared by the Bombay Municipal Corporation should be made payable at the rate prevailing on 1st January 1948 just as it has been done in the case of acquisition of land for *housing schemes* under the Land Acquisition (Bombay Amendment) Act, 1948. Provision should also be made to spread the payment of compensation for such land over a number of years, exceptions being made, if necessary, in the case of petty owners of land receiving small sums in whose case payments could be made in lump sums up to a certain amount.\*

When the proposal for the construction of the Thana creek crossing materialises, steps would be simultaneously necessary for ensuring that the incidence of any speculative increase in land prices on the other side of the Thana creek does not have to be borne eventually by public funds when public authorities are called upon to provide for the essential requirements of the community settled there.

#### **Development of Building Sites.**

The Municipal Corporation will have given a big lead to the housing programme and to the general promotion of housing activity if they will undertake to provide annually suitable areas of building plots totalling to about a thousand acres with necessary services of drainage, water supply and other public utilities ahead of the constructional programme.

#### **Underground Railways.**

Several underground railway proposals have been examined by the Study Group. Having regard to the cost of these schemes commensurately to the benefits, whether they are undertaken for a limited underground service or for a somewhat larger area, the Study Group is of the opinion that there is no immediate case for undertaking any limited underground railway proposals.

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\* Two members disagree with the recommendations in the last two sentences of this paragraph.

The proposal for an underground railway right from Sion to the Fort area would stand, however, on a different footing. Such a proposal we are told, would involve an investment close upon a hundred crores. It is felt, however, that even this larger investment would be found to be ultimately remunerative. The Study Group recommends that the necessary investigation and survey of the project from the technical as well as other points of view may be undertaken at an early date.

### **Vertical Development.**

Considering the pressure on land in the whole of Bombay area and more especially in the island of Bombay any economies in land use that might become practicable as a result of a review of the regulations relating to vertical development must be welcomed although, in view of the limitations imposed on the density of population by the capacity of the road system and public utilities, large areas of land would not become available by permitting such vertical development and the main conclusions relating to "the budget of land", especially within the island, would remain unaffected by such marginal release.

### **Full Utilisation of Building Sites.**

Measures may be taken for the full utilisation of building sites within the island at present left unbuilt or inadequately built over. Incentives and other measures should be devised for encouraging the building up of such lands.

### **Repair and Restoration of Old Buildings.**

It is necessary to take steps for the timely repair and restoration of about 12,000 old buildings in the city which could be salvaged. This should be done by:—

(a) making financial accommodation, etc., available to the owners of buildings and if necessary by the grant of appropriate concessions and reliefs in respect of rent somewhat on the lines suggested by the Housing and Housing Finance Panel ;

(b) strengthening the powers of the Municipal authorities if necessary to provide for their carrying out such repairs and restorations of buildings in default by the landlord and for recovering the cost thereof ;

(c) enforcing more vigorously the restoration and repairs of such buildings if not carried out nevertheless.



### **Minimum Standard of Housing.**

We entirely subscribe to the view expressed by the Housing and Housing Finance Panel that the minimum accommodation for a family should consist of at least two living rooms and a separate kitchen with sanitary and other arrangements. In view, however, of the massive programme of housing which is to be carried out it may be necessary, as a transitional measure, to rest content with tenements below the standard enunciated by us. In doing so, particularly if single room tenements have to be put up with as a transitional measure, the construction of the blocks of these tenements should be so undertaken as to permit easily of the tenements being joined up to provide the minimum standard accommodation of a two room tenement\*.

### **Equivalence in Public Housing Standards.**

It is necessary to ensure a measure of equivalence in the standards of accommodation provided to their employees of different classes respectively by the public authorities.

### **Rent Control Restrictions.**

We recommend consideration of the suggestions of the Housing and Housing Finance Panel for reliefs and concessions for the private investors in the house building trade.

### **More Finances for Co-operative Housing.**

Having in view the need for expanding co-operative housing activity to the maximum possible extent we recommend that arrangements should be made for larger amounts being advanced to the Bombay Co-operative Housing Finance Society.

### **Long Term Finance for Housing Activity.**

The scheme of giving loans to certain lower income groups does not seem to have been availed of sufficiently. We recommend that the possibility of making substantial amounts of long term finance available through appropriate institutions to private house-builders particularly those building houses for themselves in localities where housing is short, may be explored by the appropriate authorities. The present upper income limit for giving such finance may also be raised.

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\*Two members however feel that sub-standard tenements should not be built even as a transitional measure.

### **Slum Clearance.**

It is inevitable that a substantial portion of the slum-dwellers will have to be housed outside the island. Apart from reserving areas out of the suburban tracts coming under development immediately north and east of the island for such rehousing schemes for slum-dwellers, the grant of tapering subsidies, that is to say progressively diminishing concessions, to cover the cost of transport may have to be considered.

Pending provision for pucca accommodation to all slum dwellers, plinths in properly laid-out grounds with the amenities of conservancy, drainage and water supply at modest rentals may have to be provided to enable slum dwellers to put up their own structures, subject to minimal conditions regarding height, dimensions, etc., and restrictions with reference to fire and rain-proofing. Such plots may have to be located in the proximate suburban areas and, as far as possible, near existing lines of communication, to facilitate the problem of transport. Similar arrangements may be made where practicable in the existing slum areas as well.

### **Public Land-owning Authorities to comply with Zoning and other Regulations.**

We recommend that all land owning public authorities including the State and the Central Governments, like other land-owners should comply with the requirements in respect of land use, (and especially for location of industrial units), which may be laid down by the Corporation.

### **Relocation of Government Establishments.**

As a lead to relocation of private industries it would be well worth while of the State and the Central Governments and other public authorities closely to examine the possibilities of removing offices and establishments under their control from the island of Bombay to the mofussil areas and failing that to the suburbs of Greater Bombay.

### **Traffic Improvements.**

The construction of a main highway connecting Frere Road via Reay Road and Sewree to Wadala and the Tulsi Pipe Line Road (already under construction by the Corporation) should be expedited. A short tunnel under the Malabar Hill to join up to a road along the seaface on the other side of the hill will also help relieve the present congestion on Peddar road.

The other recommendations of the Communications and Traffic Panel for improving the traffic circulation system and the road surfaces in the Island and the suburban areas deserve the immediate attention of the concerned authorities.

### **Staggering of Office Hours.**

The scheme for a slight staggering of hours of work of Government offices, banks, etc., recommended by the Communications and Traffic Panel may be considered by Government in consultation with the interests involved.

### **Parking.**

The provision of parking lots can be improved, by the same general line of action which the Study Group has recommended for obtaining sufficient open space in the Island of Bombay for the various public requirements therein. Detailed suggestions made by the Communications and Traffic Panel regarding parking of vehicles on certain roads during certain periods may also be considered.

### **Co-ordination in the Activities of Different Utilities.**

It is necessary to review the present lack of co-ordination between the different utilities, including those controlled by the Corporation in respect of their activities involving the digging up of roads. The Study Group would invite the attention of the Municipal authorities to the avoidable irritation, waste and inconvenience caused by this and recommend that proper co-ordination be established.

### **Goods Trucks.**

It may be considered whether goods trucks should not be excluded from certain roads, at any rate during certain times of the day.

It is recommended that a measure of control and regulation should be exercised over transport companies and regular locations appointed and furnished as terminal points for goods traffic as in the case of passenger transport of the Bombay State Road Transport Corporation.

### **Specific Immediate Measures for Improving Open Spaces and Recreational Facilities in the Island.**

As an immediate measure for provision of open spaces and recreational facilities within easy reach of the Island population we recommend the exploration of—

- (a) the possibility of setting up a park extending over 65 acres near the Race Course;

(b) the possibility of using the Race Course grounds within the Race Course track for use as a play ground by school children ;

(c) the possibility of developing Elephanta island as a recreational centre for the population of Bombay island and of organising easy and cheap ferry services across to it ;

(d) the feasibility of taking over under close Municipal surveillance plots reserved as playgrounds in different layouts of building areas sanctioned by the Municipality from time to time.

We further recommend that under no circumstances any further structures be allowed on the public playgrounds and open spaces in charge of the Government or the Corporation other than structures like pavilions for the convenience of sportsmen, etc., and that earliest possible steps should be taken for the removal of the existing structures on the Azad Maidan and such grounds, which were put up during war purely as a temporary measure, and that the practice of permitting exhibitions on the existing playgrounds and open spaces is stopped.

The possibility of removing the Race Course altogether from its present location to a suitable site in the suburbs should be actively explored and the grounds released should then be used as an open space and playground.

#### **Salt Pan Areas.**

The salt pan areas at Wadala and the marshy land adjoining them can easily be developed without affecting substantially the production of salt. The area is ideally suited for development and is in close proximity of the congested areas of the Island.

#### **Milch Cattle Stables.**

We invite attention to the gross insanitation in and about the milch cattle stables in the suburbs and suggest measures for their proper location and improvement.

Measures for the improvement of stabling should however be taken keeping in view the long term desideratum of eliminating from the City all milch cattle (other than the number necessary for an emergency reserve for milk supply) and replacing milk supply from cattle located within the city by milk brought in from rural dairy districts.

#### **Early Removal of Bandra Slaughter House.**

The shifting of the slaughter house to a more spacious location towards the eastern borders of the Island at Devnar contemplated by the Bombay Municipal Corporation would, besides providing for

opportunities for starting a number of industries based on the raw materials available in the slaughter house, encourage the shifting of the tanneries from the midst of the town, thus implementing the municipal zoning policy as well as releasing considerable area for housing and other purposes, and may be expedited.

### **Cheaper Housing and Building Materials.**

It is not possible, in the conditions prevailing in Bombay, where land is costly and where one has to go in for storeyed structures, to economise in cost by building to last for 15 or 20 years instead of 60 or 80 years as at present. Likewise, it is necessary to think in terms of the conventional building materials, viz., bricks and stone, cement, timber and steel for the major part of the housing activity.

We recommend that the State Government may initiate steps for pooling and co-ordinating the demand of the different public authorities in respect of bricks, sand/stone products, etc., and for placing orders for such requirements for a reasonably long period of about two to three years to enable the suppliers to plan for larger, cheaper and better production.

### **Difficulties in the Building Materials Trade.**

We recommend that a specific officer, either in the Public Works Department of the State Government or in the Housing Commissioner's Organisation, may be designated as the authority for attending to the difficulties and grievances of the suppliers of these materials and for initiating measures with the appropriate authorities. The Railways may also be moved for reduction in freight of sand and bricks from Kalyan, Mumbra, Bhayandar and Virar to Bombay.

### **Improving Techniques.**

The suggestions made by the Building Materials Panel for improving the technique of production in respect of bricks and for expanding facilities for undertaking seasoning of country timber also deserve consideration.

### **Co-ordinating Agency for the Programme of Improvement.**

For the carrying out of the planned programme of improvements that we recommend in different sectors of activity, e.g., housing, industrial location, improvements to traffic, suburban development, adding to the stock of open spaces for recreational and other community requirements, extensive reclamations, development of large building sites, etc., it is necessary to set up a co-ordinating agency under the highest authority to guide in the working out of the different aspects of programmes by the respective authorities and to maintain a continuous oversight over the progress of the programme in all its inter-related aspects.

It is essential in our opinion to establish an institutional arrangement for such co-ordination and consultation. The Council of Co-ordination may be a high powered advisory body comprising the representatives of the Central and State Government, the Municipality, the Bombay Electric Supply and Transport Undertaking, the Port Trust, the two Railways, the Housing Board, etc., who in the course of the discharge of their duties closely act and react on each other's fields of activity and interests and who exercise a powerful influence on the growth and development of the town. Commercial and business interests may also be represented on it.

The Chief Minister may be the presiding authority of the Council at least for the first few years and the Mayor of Bombay and the Minister of the State Government principally concerned would appear to be appropriate incumbents for two of the Vice-Chairmanships of the Council. It may have a sub-committee, for detailed working at the official level, including among others, the Municipal Commissioner and the concerned Secretary of the Bombay Government as well as the representative of the Railways, Defence Services, Port Trust, etc.

#### **Housing for Industrial Labour.**

It should be possible to dissipate many of the difficulties anticipated and apprehensions entertained by employers in respect of provision of employee housing, if a separate authority undertakes to build houses and administers the housing accommodation and collects rents, etc.

Under the very large increase in the volume of public housing that we envisage there would be sufficient constructional activity to accommodate fully the energies of the Housing Board in respect of other components of the Housing programme even if the housing for industrial labour is sliced off and entrusted to a different authority.

While every effort may be made to reduce the burden on the employer and also to release his capacity for raising capital funds as far as possible for productive activities, it must be recognised in the special conditions of Bombay area, as a matter of social policy, that the responsibility for providing housing for labour, at any rate in some measure, must be borne and discharged by Industry.

We would recommend that the Government of Bombay may represent to the Central Industrial Finance Corporation as well as the State Finance Corporations to make financial requirements for housing eligible for "accommodation" in the case of employers in the Bombay area applying to them for funds.

It is pre-eminently fair and just that the provident fund accumulations contributed by employees and their employers should be available to the maximum possible extent for ameliorating the conditions of housing of industrial labour in that particular area from which they are derived.

If not for the current Plan, it ought to be possible at least for the purposes of the Third Five-Year Plan to make available these resources for financing the industrial labour housing programme in Bombay area.

If capital funds are found in this way, the Government subsidy may take the shape of a contribution towards the recurring subsidy element. As at present Municipal taxes are leviable on the entire economic rental even in respect of subsidised housing and not on the subsidised rents. Like-wise, capital and recurring expenditure on the provision of such housing does not earn for the employers appropriate reliefs and rebates in the assessment of their income tax dues. This is hard on the employer and is a deterrent to the provision of subsidised housing and should be rectified.

If these reliefs are granted we should imagine that the element of the recurring subsidy falling to be borne by the employer would be brought within his capacity to bear and we feel that this residual element ought to be borne by him.†

#### **Town Administrations for Satellite Townships.**

We endorse the recommendation of the Industrial Location Panel that after the setting up of industrial areas and Satellite townships etc., outside Greater Bombay limits, these localities should be managed by separate town administrations to allow sufficient time to the industry started in these areas to establish themselves before they are burdened with taxation by local authorities.

The work of establishment of industrial estates, industrial areas and Satellite towns etc., may be entrusted to a separate statutory corporation to be constituted for the purpose.

Administrative and statutory arrangements should be devised whereby a measure of co-ordination would be introduced between activities of local authorities of outlying regions adjoining Bombay and the Bombay Municipal Corporation.

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†Two members advocated that employees should bear 50 per cent. of the recurring subsidy element if all these concessions are granted to them.

If necessary, the structure of the Municipal Corporation Act may be amended to provide that it may deal differently in respect of rates of taxation, regulation of building activity, etc., with rural areas included at any time within the Corporation limits.

#### **Agency for long Term Programmes.**

It is a point for consideration whether for carrying out some of the long-term programmes which we have envisaged in our report it is not necessary to consider the setting up of a separate statutory authority of the nature of an improvement trust or development corporation.

In any event for the large Reclamation schemes recommended it would be necessary, we presume, to set up a separate Reclamation Authority.

While it is possible that the Municipal Corporation would and could itself carry out all the different aspects of the programme adequately, it is conceivable that the prospects of implementation of such a programme might be reckoned to improve if the long term projects are distinguished and segregated\* from the day to day running of Municipal administration.

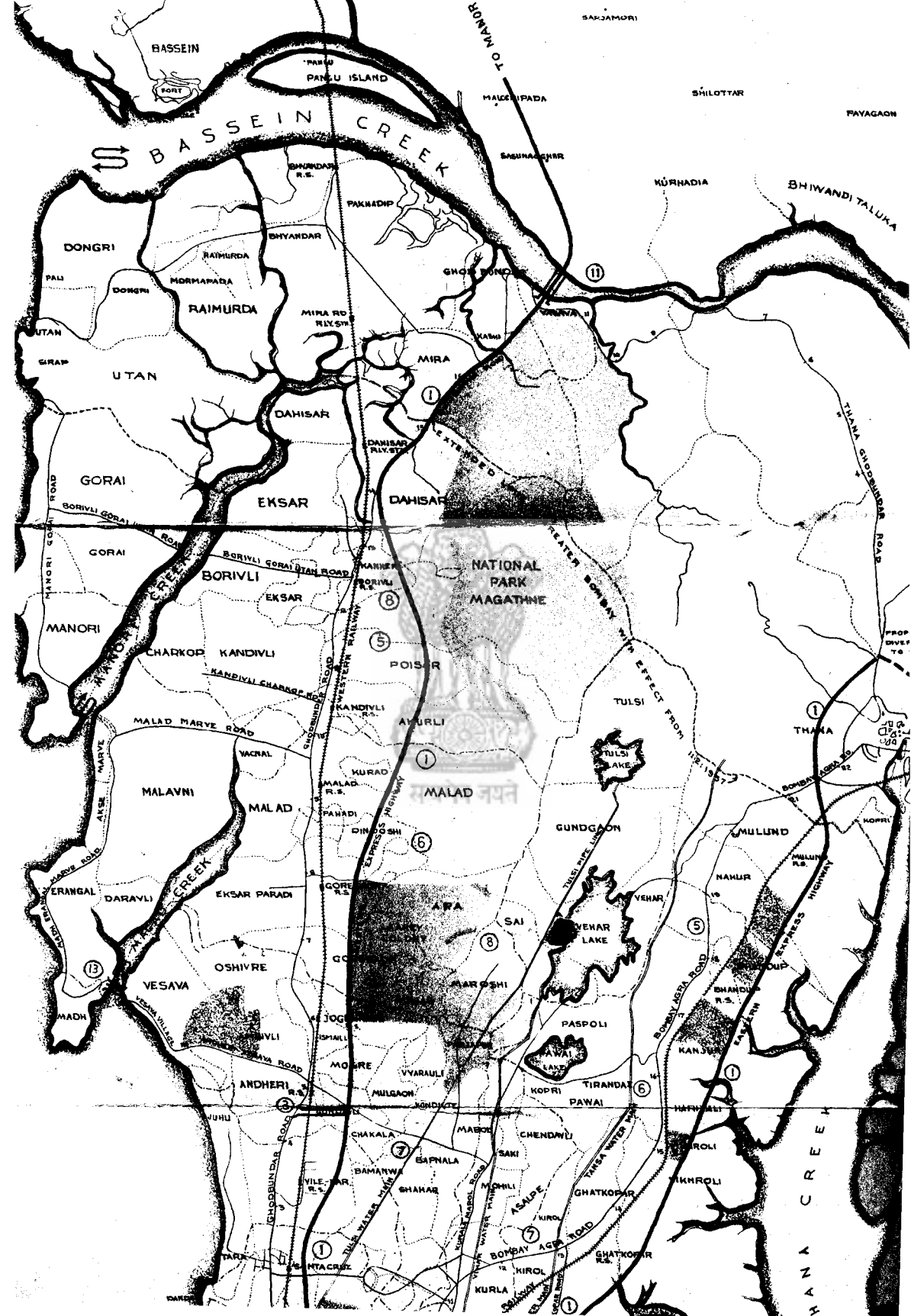
#### **Financial Implications.**

Most of the new lines of activities suggested by us would be self-liquidating over a period of years. Some of these will in fact augment the financial resources of the Municipal Corporation which will have to share a major portion of this burden. We feel, however, that it should be possible for the Corporation to bear this burden and to arrange for its necessary financing.

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\* Some members feel that the Municipality will be able to accomplish these programmes if a separate department is created within the Municipal administration to look after these duties exclusively.





ITALUNA

TO SHIWANDI

MA. SHIVSARDA ROAD

PROPOSED DIVERSION TO POONA

TO MASIK

TO POONA

KALYAN

ANJUN

ULHAS RIVER

AGAS AN

सत्यमेव जयते

SC

WVA

DAYGHAR

PAPASPADA

POONA

DAYGHAR

POONA

POONA

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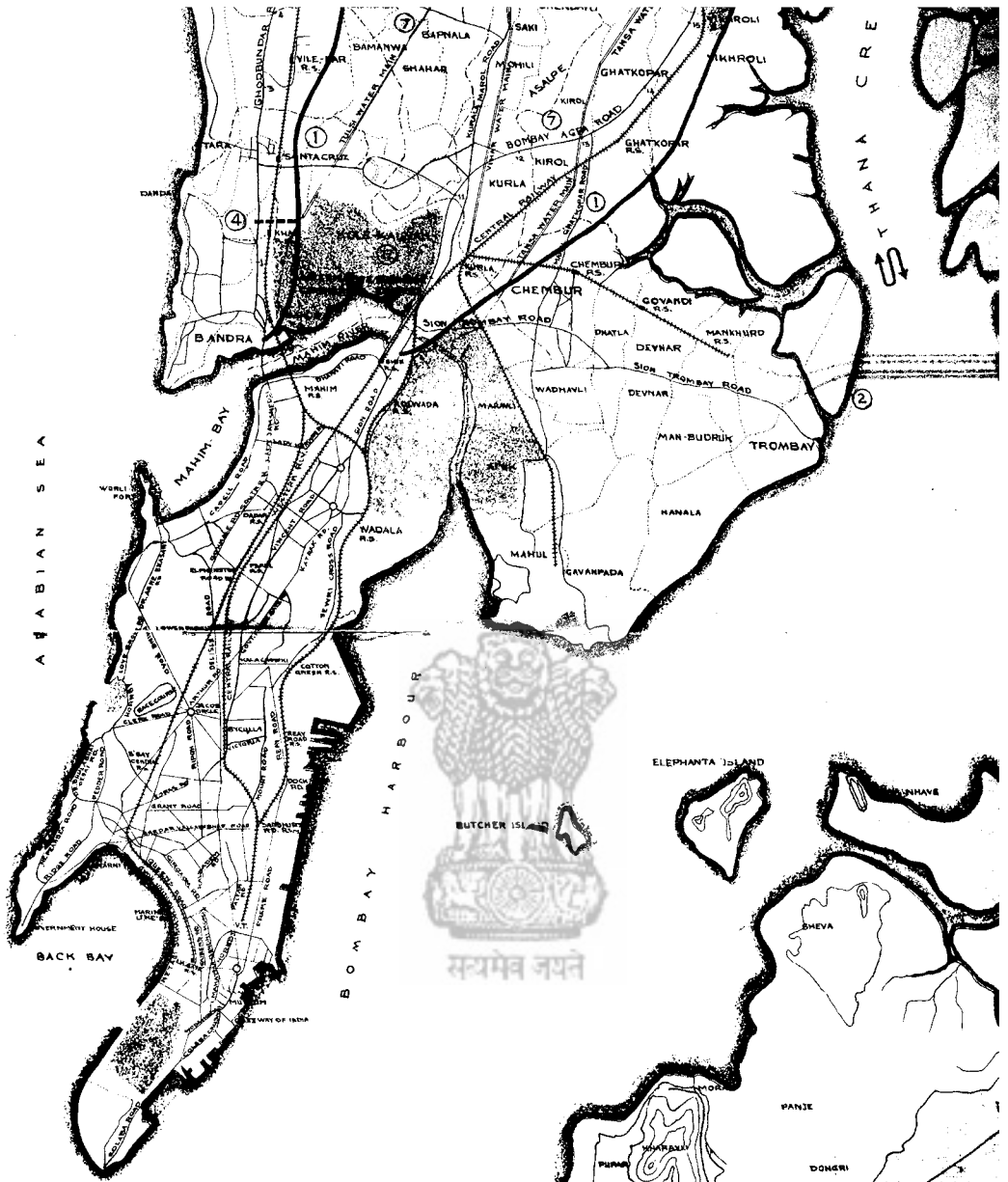
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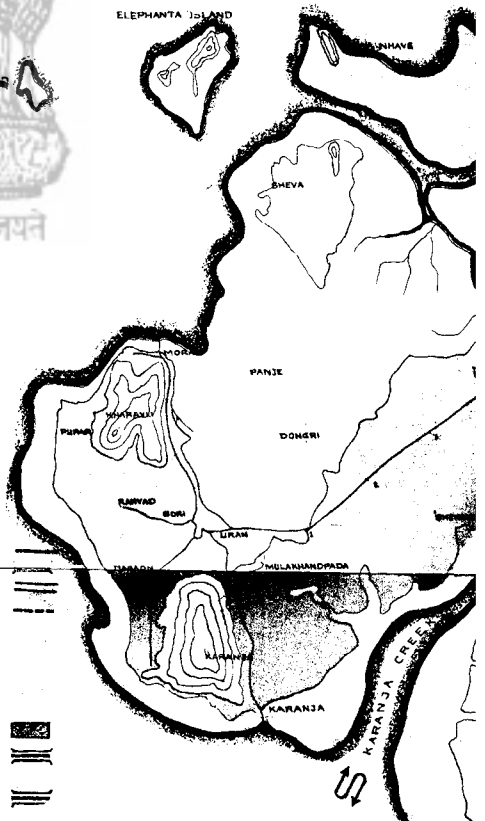
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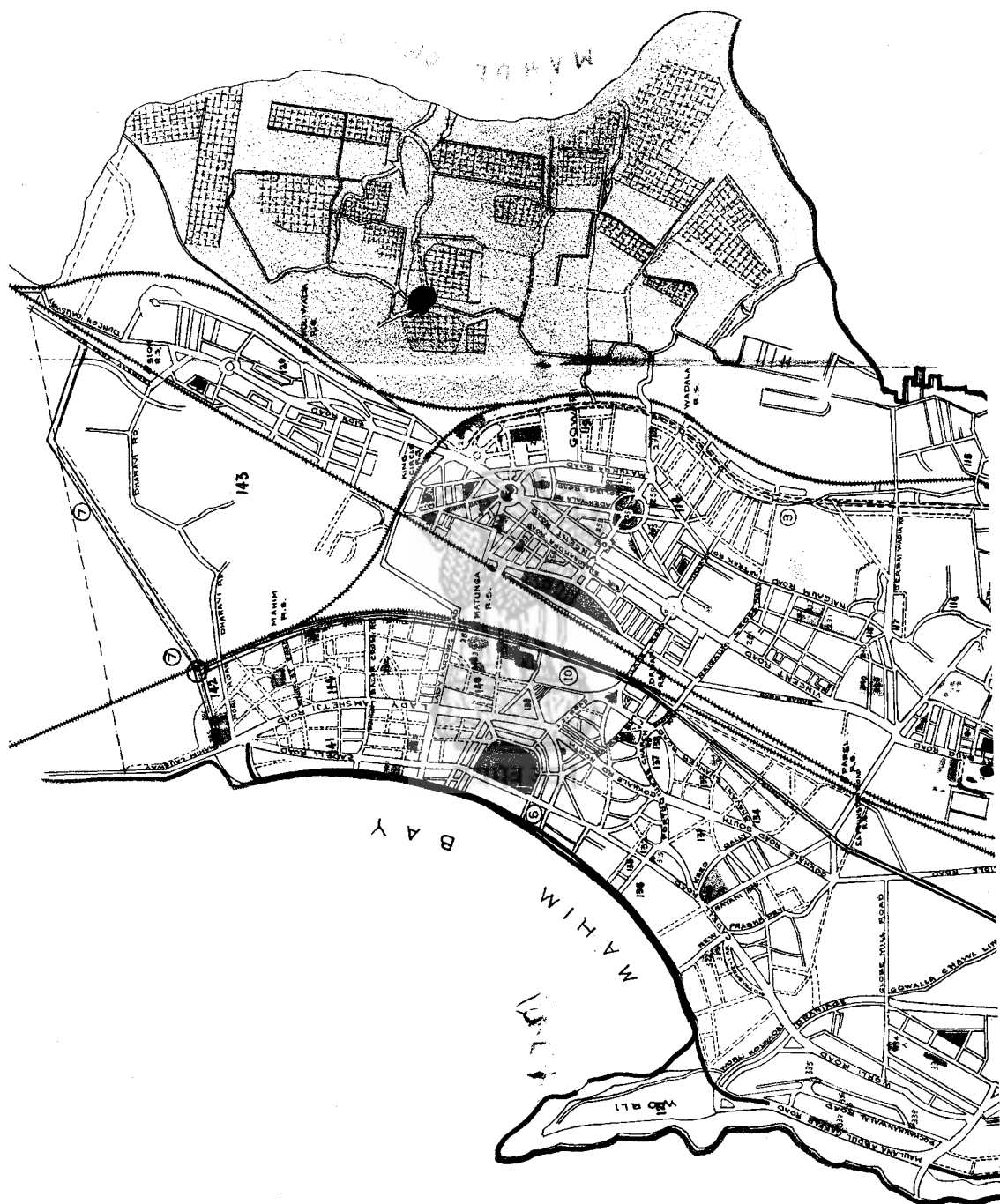


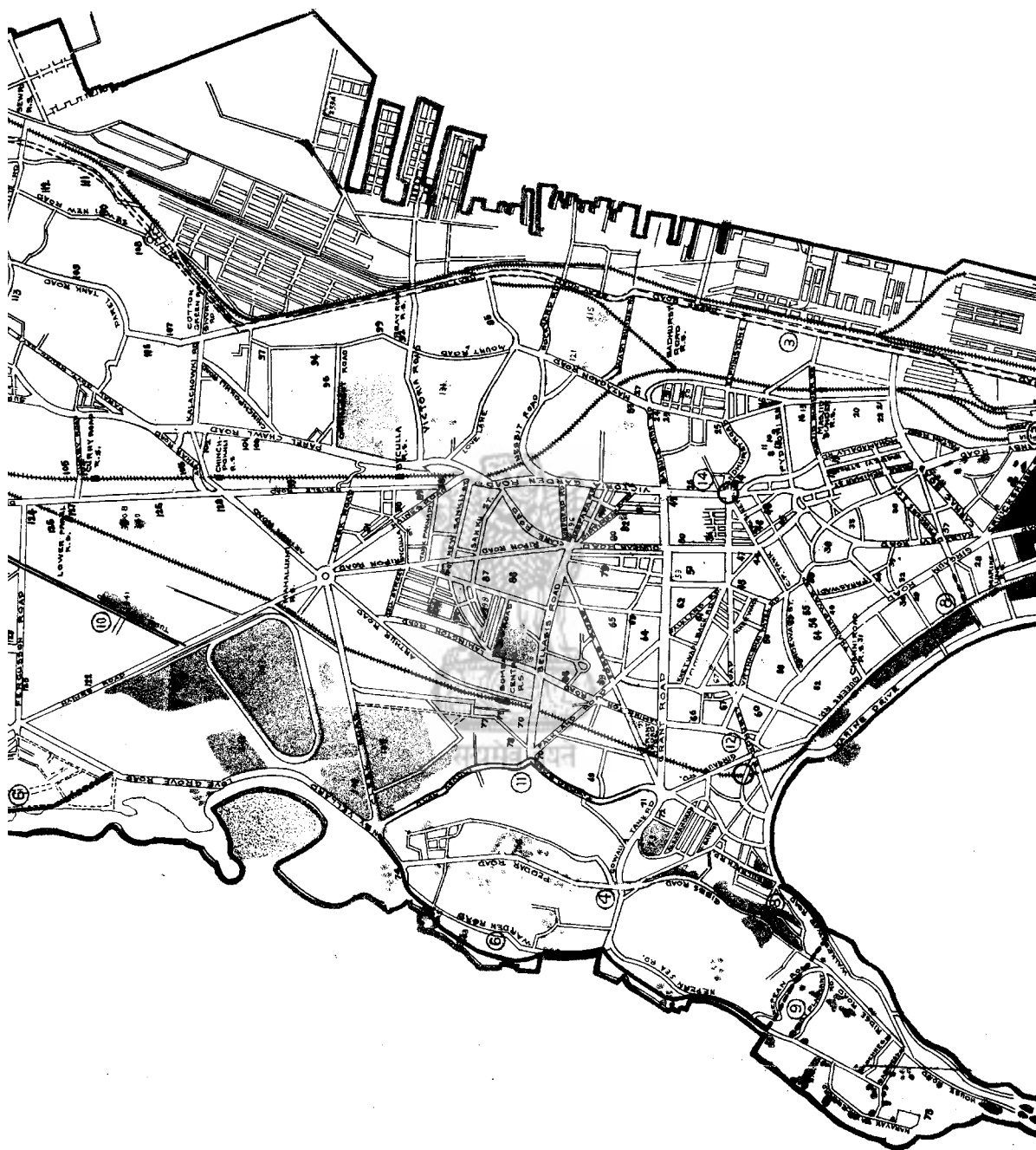
### LEGEND

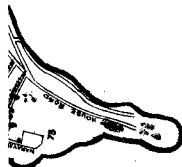
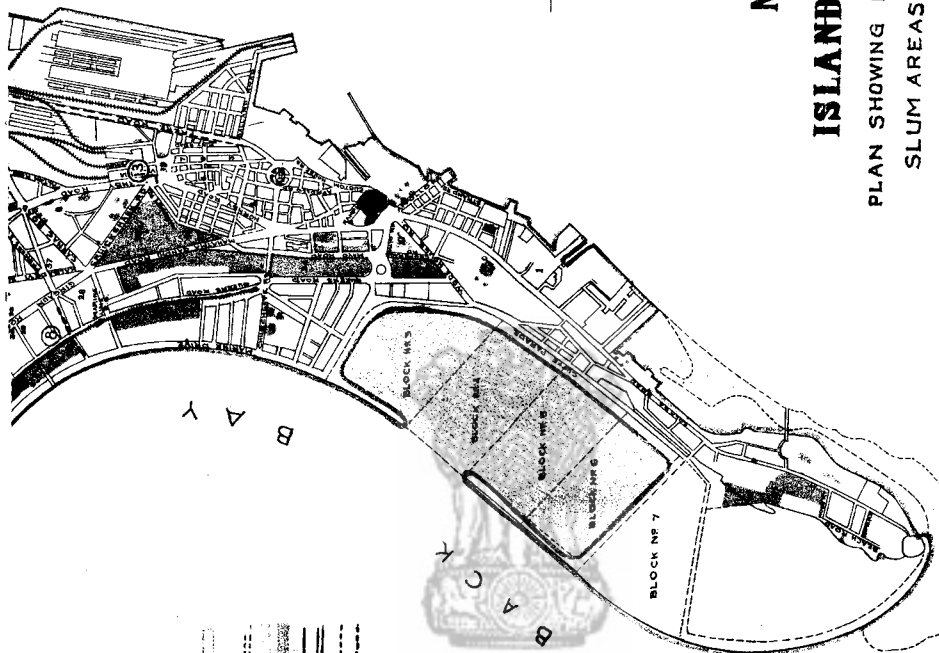
- 1 PROPOSED EASTERN & WESTERN EXPRESS HIGHWAYS (IN PROGRESS)-----
- 2 " " RAIL CUM ROAD BRIDGE ACROSS THANA CREEK-----
- 3 " " OVER BRIDGE NEAR ANDHERI RAILWAY STATION-----
- 4 " " EXTENSION OF EXISTING SUB-WAY NEAR SANTACRUZ-----
- 5 ROAD FROM BORIVLI-DANISAR ON THE WEST TO BHANDUP-MULUND ON THE EAST-----
- 6 " " MALAD GOREGAON ON THE WEST TO VIKHROLI ON THE EAST-----
- 7 " " ANDHERI ON THE WEST TO GHATKOPAR ON THE EAST-----
- 8 " " AAREY COLONY TO NATIONAL PARK AND BORIVLI (IN PROGRESS)-----
- 9 POSSIBLE SUBURBAN EXTENSION-TRANS THANA CREEK-----
- 10 PROPOSED AREAS FOR RECLAMATIONS-----
- 11 PROJECTED BRIDGE ACROSS BASSEIN CREEK-----
- 12 ALTERNATIVE BUSINESS AND COMMERCIAL CENTRE-----
- 13 BRIDGE ACROSS VERSOVA CREEK-----











# LEGEND

- 1 AREA PROPOSED FOR RECLAMATION IN THE ISLAND OF BOMBAY
- 2 EXISTING SLUMS IN THE ISLAND OF BOMBAY
- 3 EASTERN ARTERY CONNECTING FINE ROAD WITH REAY ROAD AND SEWRI TO WADALA
- 4 FLY OVER BRIDGE AT KEMPS CORNER
- 5 EXISTING PARKS AND PLAYFIELDS
- 6 MARINE DRIVE FROM NEPEAN SEA ROAD TO MAHIM
- 7 OVER BRIDGE NEAR MAHIM AND ROAD BETWEEN MAHIM AND SION
- 8 SUB-WAY AT PRINCESS STREET WITH MARINE DRIVE
- 9 PROPOSED TUNNEL BELOW THE MALABAR HILL
- 10 TULSI PIPE ROAD (JOINING HAINES ROAD)
- 11 WIDENING OF TARDEO ROAD
- 12 " " KENNEDY BRIDGE
- 13 SUB-WAY AT BORI-BUNDER
- 14 " " BHENDI-BAZAR

## MAP OF THE **ISLAND OF BOMBAY** PLAN SHOWING PRESENT PARKS, SLUM AREAS, SITES FOR RECLAMATION AND PROPOSALS FOR EASEMENT OF TRAFFIC